FILE COPY

Office - Supreme Court, U. S.
FILED
SEP. 27 1940
CHARLES ELMORE CROPLEY
CLERK

Appendix A
To Respondent's Brief.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1940

No. 12

THE UNITED STATES OF AMERICA,
Petitioner,

v.

APPALACHIAN ELECTRIC POWER COMPANY,
Respondent.

August 31, 1940

On Writ of Certiorari to the United States Circuit Court of Appeals for the Fourth Circuit.

INDEX

APPENDIX A
TO RESPONDENT'S BRIEF

PART I—ANALYSIS OF THE EVIDENCE IN THE RECORD UPON THE ISSUE OF NAVIGABILITY *Vel Non* OF NEW RIVER 1

A. The evidence not only supported the Trial Court's finding, concurred in by the Circuit Court of Appeals, that New River is non-navigable but precluded any other finding 2

1. The physical characteristics of New River alone establish that it is non-navigable ... 2

(a) General description 2

(b) Sufficiency of flow 4

(c) Mountainous character of stream.... 5

(d) Fall and slope 8

(e) Velocities 18

(f) Photographs of ledges and shoals.... 24

(g) Ledges and shoals—their character and extent 29

(h) Natural depths 36

2. The absence of any use of New River for trade, travel or transportation by early traders, industries or even military expeditions, or indeed any use before the experimental local use under the stimulus and novelty of artificial local federal improvements, is compelling evidence of its non-navigability 39

PAGE

(a) History does not record any use of New River as a means of trade, travel or transportation by early settlers, traders or explorers 39

(b) Although the lead and iron industries were established on upper New River in very early days, history not only fails to disclose any use of New River for the transportation of either product but affirmatively establishes that neither product was ever transported, even locally, on New River, except a limited experimental and temporary local movement in 1881-1882 48

(c) There is no other evidence of any substantial use of New River, even local in character, before the federal work.. 53

3. The nature and extent of the federal work on New River and its subsequent abandonment not only failed to support an inference of navigability but constituted strong evidence of lack of practical utility for navigation 63

(a) The use during and after the federal work was essentially limited in amount, local, and of relatively short duration 65

(1) Miscellaneous use of river by bateaux or "keel-boats" 65

(2) Transportation of pig iron 68

(3) Furnaces along New River continued to operate after the experiment in pig-iron boating ceased.. 73

PAGE

(4) "Steamboats" 75

(5) "Stunting" 77

(b) The nature and scope of the federal work were insignificant as to aim and ineffective as to accomplishment 79

4. The petitioner failed to show practical use, or susceptibility for practical use, in interstate commerce of substantial and permanent character 96

(a) Testimony dealing with alleged uses of New River 96

(1) Alleged uses during Civil War era 97

(2) Alleged uses during period of unsuccessful federal work 98

(3) Even the localized uses elsewhere did not extend into the 60-mile gap below New River Bridge 99

(4) Dearth of personal experiences of commercial use by those of petitioner's witnesses who testified concerning vicinity of the Horseshoe 114

(5) Testimony of local witnesses of petitioner largely lacked probative value 115

(6) High water in relation to local uses 120

(7) Any appreciable use of New River in West Virginia was not only limited to a short reach above Hinton but was not permanent in character 122

PAGE

(8) Inaccurate nature of petitioner's tabulation and diagram of alleged uses 130

(b) The reports of the Army Engineers show that the work on the river was discontinued, not on account of the opening of the railroad nor on account of the exhaustion of natural resources but, because the cost was greatly exceeding the estimates made by the Army Engineers 135

(c) The Army Engineers' reports, fairly analyzed, show that petitioner has exaggerated the extent of water borne commerce during the period of the federal work 140

5. Although neither Congressional nor official action can make a river navigable, all considered action of Congress and the War Department sustains the conclusion that New River is non-navigable 145

(a) All considered action by the War Department has reflected the view and the fact that New River is non-navigable 145

(b) Significance of attitude of federal government regarding New River..... 150

6. Although comparison with other rivers (held navigable or non-navigable) is irrelevant in fact and law, petitioner's comparisons serve only to confirm the non-navigability of New River..... 157

(a) Comparison with Colorado, Green and Grand Rivers 158

PAGE

(b) Comparison with Fox River 160

(c) Comparison with Desplaines River... 162

(d) Comparison with Tennessee River.... 163

PART II—ANALYSIS OF EVIDENCE RELEVANT TO ISSUE OF IMPAIRMENT OF NAVIGABLE CAPACITY 164

A. Petitioner's allegedly undisputed evidence ... 164

B. Supplementary review of certain evidence relating to the alleged effect of so-called power "waves" or tides upon navigable capacity... 172

C. The testimony cited by petitioner with reference to alleged difficulties of navigation on the Kanawha River is not only largely erroneous but plainly irrelevant 174

PART III—LEGISLATIVE HISTORY OF THE FEDERAL WATER POWER ACT AND ANALYSIS OF SECTION 23 .. 179

A. Legislative history affords no basis for the contention, but in fact denies, that Congress attempted to authorize the Commission to require a license for a project located in a non-navigable stream and not involving any federal property 179

1. Prior legislation recognized clearly the distinction between the authority to regulate structures actually located in navigable waters and the authority merely to prevent acts in non-navigable waters which might affect navigable capacity below..... 180

2. The extent of the power of Congress to require a license was already well defined in the Rio Grande decision and recognized by Congress 183

PAGE

(a) The Rio Grande decision confirmed that Congress did not and cannot require its authorization for structures in non-navigable streams 184

(b) The limitations upon Congress' authority and the distinctions between navigable and non-navigable waters were clearly borne in mind by Congress in enacting the Federal Water Power Act 191

3. The Federal Water Power Act was merely a consent statute creating a governmental agency to authorize projects (in navigable waters) otherwise unlawful under the Act of 1899 198

4. Section 23 was designed merely to afford intending developers a means of obtaining an administrative determination of the character of the stream in Cases of Doubtful Navigability 201

5. Petitioner's claim of authority to require a license for projects on non-navigable streams results from a strained and belated administrative interpretation, not from any intent of Congress 206

B. The language of the Act, as well as Congress' clear intent, negatives the right of petitioner to require a license for a project on a non-navigable stream 212

1. The statute is unvarying in its reference to navigable waters only 214

2. The section of the Power Act empowering the issuance of licenses authorizes them only as to projects on navigable waters 215

PAGE

3. A "proposed construction" itself cannot affect the interests of interstate commerce unless actually located in navigable waters 217

4. Petitioner's interpretation requires a tortuous construction of the language of Section 23 220

C. The 1935 amendments do not support petitioner's claimed interpretation 225

D. Petitioner's interpretation fails to meet the tests prescribed by this Court..... 230

E. The reasonable interpretation of Section 23, required by its legislative history, its language and recognized principles of statutory construction, leaves every federal interest adequately protected 234

TABLE OF CASES

B.

Barrett v. *Van Pelt*, 268 U. S. 85.....224, 225

C.

Church of Holy Trinity v. *United States*, 143 U. S. 457 224
Crowell v. *Benson*, 285 U. S. 22..... 206

E.

Economy Light & Power Co. v. *United States*, 256 U. S. 113 162

F.

PAGE

Fleishman Co. v. *United States*, 270 U. S. 349..... 224

G.

Georgia v. *Tennessee Copper Co.*, 206 U. S. 230....190, 191
Gibbons v. *Ogden*, 9 Wheat. 1 179
Gilman v. *Philadelphia*, 3 Wall. 713..... 179
Greenleaf Lumber Co. v. *Garrison*, 237 U. S. 251.... 236

H.

Hawaii v. *Mankichi*, 190 U. S. 197..... 224

I.

Interstate Commerce Commission v. *Oregon-Washington R. & N. Co.*, 288 U. S. 14.....215, 220, 230, 231 232, 233

L.

Lau Ow Bew v. *United States*, 144 U. S. 47..... 224
Louisville Bridge Co. v. *United States*, 242 U. S. 409 .....236, 237

M.

Monongahela Bridge Company v. *United States*, 216 U. S. 177 236
Montello, The, 11 Wall. 411 160
Montello, The, 20 Wall. 430..... 160

N.

National Labor Relations Board v. *Jones & Laughlin Steel Corporation*, 301 U. S. 1..... 233
New Jersey v. *Sargent*, 269 U. S. 328..212, 213, 214, 215, 225
North Bloomfield Gravel Mining Co. v. *United States*, 88 Fed. 664 190

O.

PAGE

Oates v. *National Bank*, 100 U. S. 239 224
Oklahoma v. *Texas*, 258 U. S. 574 .....116, 151, 154

S.

Sanitary District of Chicago v. *United States*, 266 U. S. 405 .....183, 236
Stewart v. *Kahn*, 11 Wall. 493 224

U.

Union Bridge Co. v. *United States*, 204 U. S. 364....236, 237
United States v. *Appalachian Electric Power Co.*, 23 F. Supp. 83, 107 F. (2d) 769 .....2, 13, 38, 39
United States v. *Bellingham Bay Boom Co.*, 176 U. S. 211 182
United States v. *Oregon*, 295 U. S. 1..... 115
United States v. *Rio Grande Dam & Irrigation Co.*, 174 U. S. 690....182, 184, 185, 186, 187, 188 189, 190, 217, 227, 230
United States v. *Utah*, 283 U. S. 64.....157, 158, 159, 160

W.

West Chicago Railway v. *Chicago*, 201 U. S. 506.... 236
Woodruff v. *North Bloomfield Gravel Mining Co.*, 18 Fed. 753 190

CONSTITUTION, STATUTES AND MISCELLANEOUS AUTHORITIES.

PAGE

Annual Reports of the Federal Power Commission
- 1st Rep. 198, 206, 207
- 2d Rep. 208
- 3d Rep. 208
- 4th Rep. 200, 207, 208
- 5th Rep. 208
- 6th Rep. 208
- 7th Rep. 96, 208
- 8th Rep. 208, 218
- 10th Rep. 155, 209
- 11th Rep. 155, 210

Committee on Interstate and Foreign Commerce
- Hearings on H.R. 5423, 74th Cong., 1st Sess. 226

Congressional Record
- Vol. 53
  - pp. 2197-8 196
  - p. 2580 194
  - p. 2641 194
  - p. 2651 194
  - p. 3244 194
- Vol. 54
  - pp. 779-84 194
  - pp. 1006-7 ..... 194, 196
  - pp. 1264-8 194
  - p. 2786 194
- Vol. 58, p. 2226 194
- Vol. 59
  - p. 1041 194
  - p. 1103 203
  - p. 1430 191
  - pp. 6529-31 194

PAGE

p. 7723 194
p. 8349 ..... 199, 200, 205

Constitution, Federal Art. IV, sec. 3 179
Constitution, Federal Art. I, sec. 8 179

Federal Water Power Act and as amended by Federal Power Act of 1935 ..... 179, 183, 184, 185, 188, 189, 191, 198, 206, 211, 212, 217, 225, 226, 230, 233, 235, 237
Sec. 3 201
Sec. 4 215
Sec. 4(d) 201, 203, 215, 216, 218, 222, 223, 227
Sec. 4(e) 226, 227
Sec. 6 201
Sec. 10 201
Sec. 10(b) 214
Sec. 10(c) 214, 218
Sec. 11 214
Sec. 12 214
Sec. 13 218
Sec. 14 201
Sec. 21 218
Sec. 23 ... 179, 201, 202, 203, 204, 205, 206, 207, 208, 209, 212, 213, 215, 216, 218, 219, 220, 221, 222, 223, 227, 228, 229, 234, 235
Sec. 23(b) 226, 228

Federal Power Commission
Rules and Regulations 223
Supplement to Decisions (under Sec. 23) 208

House Documents
No. 1318, 74th Cong., 1st Sess. 211, 226

House Reports
No. 61, 66th Cong., 1st Sess. 197
No. 910, 66th Cong., 2nd Sess. 202

Interstate Commerce Act of 1887 231

Jefferson, Notes on Virginia 49

PAGE

Public Utility Holding Company Act of 1935 ..211, 225, 226
Hearings on 211, 217, 228

Rivers and Harbors Act of 1890-1892.....182, 184
Sec. 10 182

Rivers and Harbors Act of 1899..180, 181, 182, 183, 184, 188, 189, 198, 200, 207, 208, 220, 227, 228, 229, 230, 235, 236, 237
Sec. 9 .....180, 182
Sec. 10 .....181, 182, 183
Sec. 12 183

Senate Documents
No. 301, 61st Cong., 2nd Sess. 194
No. 621, 74th Cong., 1st Sess. 211, 226

Statutes at Large
Vol. 26, p. 454 .....182, 184
Vol. 27, p. 110 .....182, 184
Vol. 30, p. 1151 181
Vol. 32, p. 331 154

Transportation Act of 1920 231

United States Code
Title 33, Sec. 401 180
Sec. 403 181

IN THE

Supreme Court of the United States

OCTOBER TERM, 1940

No. 12

THE UNITED STATES OF AMERICA
Petitioner,

v.

APPALACHIAN ELECTRIC POWER COMPANY
Respondent.

On Writ of Certiorari to the United States Circuit Court of Appeals for the Fourth Circuit.

APPENDIX A
TO RESPONDENT'S BRIEF

PART I

Analysis of the evidence in the record upon the issue of navigability *vel non* of New River.

In our view the evidence reviewed in the opinions of the lower courts and cited in our Brief so plainly establishes that the concurrent finding of non-navigability made by the lower courts is supported by substantial evidence that no detailed analysis of the very voluminous evidence offered and received upon this issue should be necessary. For that reason we have sought to avoid burdening the Court with detailed analysis in our Brief. However, if the Court should take a different view of the issue, we

have deemed it our duty to supply in this separately bound Appendix a comprehensive review of the evidence upon this issue for such assistance as it may afford the Court.

A. The evidence not only supported the trial Court's finding, concurred in by the Circuit Court of Appeals, that New River is non-navigable but precluded any other finding.

It is well established that navigability is a question of fact and that in each instance the question of whether a river is navigable depends upon the facts peculiar to it. This principle applies with especial force to New River, for the evidence establishes that "it properly is said to be *sui generis*" (R. 2893; 107F. (2d) 769, 780).

On the question of navigability, none of the facts peculiar to the river under examination are more important than are its peculiar physical characteristics. We therefore first examine the evidence from that point. That evidence alone, we think, establishes that New River is patently non-navigable.

1. *The physical characteristics of New River alone establish that it is non-navigable.*

(a) General Description.

New River is approximately 341 miles in length. It has its source in North Carolina and enters Virginia in Grayson County and flows generally in a northeasterly direction

> "through and between spurs of the Blue Ridge Mountains, parallel to the main divides of this Ridge and the Alleghenies" (Ex. 145, R. 2702-3).

until it reaches the horseshoe near Radford, Virginia, where it turns sharply in a northwesterly direction

> "and keeps that same general trend of flow into West Virginia and to its mouth where it joins the Gauley River to form the Kanawha River. Through almost its entire length the river flows through a

rugged mountainous country. Its valley is narrow, the flood plain being very little wider than the low-water channel which varies in width from about 200 to 1000 feet. In many places the banks are sheer bluffs rising from the river's edge. Ledges of limestone, sandstone, and shale crossing the river at frequent intervals create rapids and waterfalls. The waterfalls vary in height up to about 18 feet. Between the ledges there are usually short pools of varying depths. The low-water depth in the channel varies from a few inches to more than 6 feet'' (Ex. 145; R. 2710).

The pools are rarely over a mile in length (Ex. 31; R. 2282). For long distances downstream from Radford the river flows substantially at right angles across numerous resistant rock strata. These steeply upthrust rock strata, which cross the river perpendicularly to the thread of the stream, have a unique characteristic in that the prevailing slope of such strata is downward in an upstream direction rather than downward in a downstream direction.[1] This peculiar characteristic accentuates the roughness and turbulence of the stream. Where the softer strata have been worn away immediately downstream from the resistant strata, huge boulders, many of which have broken off from the resistant strata above, are commonly found. Some of these boulders project above the water surface and others are treacherously submerged, as such channel as exists through the shoals, rapids and falls is frequently tortuous and difficult to find (Matthews, R. 1677-1681; Buck,

[1] The unique physical characteristics of New River are well shown by the testimony of Professor Matthews who fortunately and entirely independently of this case had made a detailed study of a portion of New River for the Virginia Geological Survey. Matthews is a geologist specializing in stratigraphy. His testimony clearly establishes the unique character and slope of the strata across which New River flows, the unique effects which this geological condition produces upon the detailed profile of the stream and the fact that New River by reason of its geological setting is *sui generis* (Matthews, R. 1676-1681).

R. 1706; Putnam, R. 1784-1786; McWane, R. 1660-1661; Ex. 145, R. 2703; Ex. 31, R. 2282-3; Ex. 35, R. 2350-2355).

The mile-by-mile surveys of New River from Hinton to the North Carolina line which were made before any work had been done by the Government, graphically portray the great number of shoals, rapids and falls throughout the length of New River. These mile-by-mile surveys are remarkable for the infrequency with which the engineers found even an occasional pool which they could denominate as "good water". They disclose that within many individual miles there are numerous shoals, projecting ledges and falls, and that in many instances shoals, ledges and rapids cover a very large part of the entire mile under examination. They disclose the great extent of artificial improvement which was necessary even to provide an inconsequential shallow draft keel-boat passage. One has only to read the reports of these mile-by-mile surveys to realize that New River is, and in its natural condition was, patently non-navigable (Ex. 31, R. 2282-2287; Ex. 35, R. 2351).

(b) Sufficiency of Flow.

Petitioner argues (Pet. Br. 62) that there is a sufficiency of water flow in the case of New River and that that is one of the bases for determining navigability. Of course, navigable capacity is not established by the presence or absence of stream flow, inasmuch as it seems obvious that, if there is an absence of sufficient stream flow to support navigation, the Court will not look further for impediments to navigation. Actually, rivers with comparatively small drainage areas and flows may support navigation due to other physical characteristics which are of greater importance, such as, for example, the location of a river in a series of ancient lake beds or pools or its location in a drowned valley, as is true of the York and other rivers on the Atlantic Coast.[1]

[1] In fact, what navigation requires is a channel filled with water to at least a minimum depth and a minimum width in which water need *not flow* at all.

On the other hand, a stream may be a "mountain torrent", as Captain Craighill described New River (Ex. 565, R. 2837), with an abundant supply of water and at the same time, owing to its unfavorable physical characteristics, be utterly unsuitable for a highway of commerce.

(c) Mountainous Character of Stream.

The excerpts from the Army Engineer reports quoted under the sub-heading (a) *supra*, entitled "General Description", as well as many other reports of the engineers, again and again emphasize the fact that New River is characteristically a mountain stream throughout its entire course.

For example, the report of N. H. Hutton, dated December 17, 1872, to Colonel Craighill, states:

> "The river in its present condition presents the usual features of mountain-streams: reaches of comparatively still and deep water separated by rapids and shoals" (Ex. 31; R. 2282).

And again in a report to the Chief of Engineers, 1876, Hutton states:

> "The masses of rock cumbering the water-way appear at times almost to have absorbed the river * * * " (Ex. 245, 56; R. 2745).

And William Proctor Smith, writing of the river in 1879 states:

> "From the latter point the river runs between the different ranges of the Blue Ridge and the Alleghany Mountains in an easterly direction for 22 miles, and thence northeasterly to the terminus of the survey. The headwaters are 2500 feet above tide water; the country mountainous, the roads rough and sometimes impassable."
>
> * * * * * * *
>
> "As is usual with mountain streams, this river presents pools of comparatively deep and still water

separated by rapids, shoals and falls" (Ex. 35; R. 2350).

Captain Craighill, who examined the river, stated in letter dated February 4, 1903:

> "Both rivers (New and Greenbrier) are mountain torrents, with very steep, rocky beds" (Ex. 565; R. 2837).

And Major Alstaetter, reporting with respect to the river, in 1912, states:

> "The river, however, partakes of the characteristics of a mountain stream, with very rapid current and bad rapids, and therefore navigation is dangerous on it" (Ex. 46; R. 2422).

Likewise Major Conklin, in a report concerning the river, dated November 19, 1934, states:

> "Through almost its entire length the river flows through a rugged mountainous country" (Ex. 145; R. 2710).

And Colonel Spalding, in a report concerning the tributaries of the Kanawha River, of which the largest is the New River, states:

> "because of their unfavorable natural characteristics (steep slope and tortuous alignment) none of the tributaries of Kanawha River offer potentialities for development in the interest of modern navigation" (Ex. 145; R. 2690).

and Colonel Herman, under date of October 15, 1932, states in his report:

> "The channel of the New River is, in general, narrow and tortuous with numerous rapids and falls, since its course lies almost entirely in a rugged mountainous region. The stream follows deep, narrow valleys formed by the long parallel folds typical of the Alleghany mountain system" (Ex. 145; R. 2703).

Additional descriptive matter appears in the Report of Lieutenant Hazzard to Captain McNeill, dated March 20, 1828:

> "From Bowyer's Ferry to within 2 miles of the Great Falls the valley of Kanawha presents a novel and frightful appearance, and the obstacles that are met with are decidedly more formidable than any that have even yet been encountered and overcome. The river here breaks through Sewell Mountain, and is confined throughout within narrow limits, bounded by rugged banks and precipitous cliffs, rising many hundred feet above the surface of the water.
>
> "Immense masses of rocks, which have been ejected from the cliffs near the brow of the mountain, cover the lower slope on both sides of the valley, giving to the whole a most appalling appearance. In many instances these huge fragments have been precipitated entirely across the bed of the stream. In such places the river when agitated and swollen by heavy rains—the current being obstructed in its course—frequently rises from 35 to 50 feet above its usual height.
>
> "Numerous rapids and falls occur, over which the water rushes with deafening impetuosity" (*Ex. 245*,[1] pp. 117-118).

Or, again, the Report of Captain William G. McNeill to Major General Macomb (printed in Report on the James River and Kanawha Canal Route), which was transmitted by letter dated March 24, 1828, from the Secretary of War to the Speaker of the House of Representatives, wherein it is said:

> "Two Falls, Buffalo Falls, Richmond Falls, and the Great Falls, with an almost continuous rapid, when perpendicular falls do not occur—in all constituting a spectacle the sublimity of which can scarcely be surpassed—characterize New River below its confluence with the Greenbrier as an impetuous and al-

[1] Where citation is to an unprinted original exhibit or to an unprinted portion of an exhibit, the citation is italicized—thus "*Ex.*"

most resistless torrent. And the general aspect of both sides of the river, with the wild features of its valley, can offer few temptations to the intrusion of civilized man" (*Ex. 245*, p. 102).

(d) Fall and Slope.

Petitioner states (Pet. Br., 64) that "the lower courts were not wholly fair in their discussion of the slope of the river. The District Court, in stating that the slope of the river above Radford and Hinton was about 4 feet per mile drew an implied contrast between these stretches and the intervening reach (R. 114). The Court below confined its discussion to the fact that the slope was 'very much greater than the average in many places' (R. 2900-01), and that the entire river had a slope of 7.1 feet per mile (R. 2895)".

With respect to petitioner's assertion, several things should be noted:

First: It should be borne in mind that petitioner has now changed two of the reaches of the river which were discussed by the District Court; that whereas, the District Court, in discussing the river, referred to a gradient of about 4 feet per mile as applicable to the stretch of 23 or 24 miles upstream from Hinton,[1] petitioner, while implying that it is dealing with the same lower stretch[2] that the District Court discussed, actually is directing its remarks to the 27 mile reach from Hinton to Wiley's Shoals. Sim-

---

[1] The pertinent quotation is as follows:

"For example, from Hinton upward for 23 or 24 miles the river has the least gradient in its course, about 4 feet per mile, with considerable pool water and few precipitous shoals. The same conditions obtain to a more or less extent on the section of the river for 25 or 30 miles above Radford" (R. 114).

[2] However, in its brief in the Court below, petitioner expressly recognized that the lower stretch referred to by the Trial Court was "The *24-mile* stretch from *Hinton to Round Bottom*" (Appellant's (Pet.) Reply Br. 8.)

ilarly, it has shortened the 60-mile middle section immediately above to 56 miles and compares not the two sections discussed by the Court but a 27-mile stretch with a 56-mile section. By such shortening, it transfers the stretch between Round Bottom (the upstream end of the 23 or 24 mile stretch) and Wiley's Shoals from the middle section to the lower section, thereby likewise transferring all of the shoals and ledges, including Wiley's Falls, into the lower stretch. Hence, petitioner, contrary to what it implies to this Court, does not in fact compare the same reaches of the stream that the courts below had under consideration.

The slope on that 23 or 24 mile stretch from Hinton to Round Bottom, while it is stated by the lower court to be about 4 feet per mile, was actually conceded by petitioner—in its tabulation appearing in petitioner's supplemental brief in the Circuit Court of Appeals (App. Supp. Br. 52)—to be 3.7 feet per mile. Moreover, petitioner in that very tabulation shows the slope in the 7.7 miles from the upper end of that 24 mile stretch to Glen Lyn, Va. (which 7.7 miles is a part of the 60-mile section) to be 5.2 feet per mile, thus exceeding the gradient of the 24 mile stretch by nearly one-half.

It is also significant to note the slope of that 24 mile stretch from Hinton to Round Bottom is about the same for the upper half as for the lower half, and throughout that 24 mile distance there are no outstanding falls, rapids or shoals (Bull Falls being the greatest obstacle has a fall of three feet). This uniform profile appears from petitioner's *Ex. 196*, although it is of a very small scale.

On the other hand, the character of the 60-mile section (Round Bottom to Radford) upstream from Round Bottom is quite different, the lower two-thirds of this section, i. e. from Round Bottom to the head of Sifford's Falls, a distance of approximately 40 miles, having a slope of 5½ feet per mile[1] while in the upper one-third of this section the

[1] This slope of course is 50% greater than that of 3.7 feet per mile in the Hinton-Round Bottom 24 mile stretch.

slope is only 2.3 feet per mile. Thus the major obstacles to navigation lie in the downstream 40 miles of this 60 mile middle section, although in the upper 20 miles thereof Barnett's Falls and Pepper Falls (about 2 miles apart) stand out on petitioner's *Ex. 196,* and in fact far exceed anything in the Hinton-Round Bottom stretch.

Again, in that 24-mile stretch above Hinton, there is no portion which even remotely approaches the steepness of slope of the 2.7 mile stretch between Big Walker Mountain Falls and the upper end of Sifford's Falls, which stretch is also in the Virginia portion of the 60-mile section and where, for a distance of 2.7 miles, the slope averages 13 feet per mile.

A careful scaling of the profile, *Ex. 196* (petitioner's appendix Vol. I) brings the slope conditions clearly to light. Thus, the heaviest concentrations of fall are as follows:

In the lower ⅔rds of the 60-mile middle section—that is the 40-mile reach upstream from Round Bottom—(mile 87.3)

				Fall per mile
Mile	91.4,	for 1.5 miles	upstream	12
"	100.0,	" 1.0 mile	"	12
"	112.0,	" 1.2 miles	"	12
"	117.3,	" 0.5 "	"	20
"	124.6,	" 2.7 "	"	13
	Total	6.9		69

In the 24-mile stretch upstream from Hinton—(mile 62.6)

				Fall per mile
Mile	64.0,	for 1.4 miles	upstream	6
"	68.0,	" 1.0 mile	"	7
"	72.5,	" 2.0 miles	"	6
"	78.0,	" 1.0 mile	"	8
"	82.5,	" 1.5 miles	"	6
	Total	6.9		33

It appears superficially from the above comparison that at the worst places the obstacles to navigation in the 40 miles of the 60 mile middle section are twice as severe as in the Hinton-Round Bottom section. However, the ratio of severity is even greater. Thus along any river there are certain normal slopes, mile by mile, required to keep the volume of water flowing. It is the *excess* over the normal

slope which forms the proper index as to obstacles to navigation. Clearly, as to relative severity of impediments, those of the 40-mile section upstream from Round Bottom are not at all of the same order as those in the 24 miles downstream therefrom, but are outstandingly more severe. Steeper slopes in the surface of rivers, of course, cause greater velocities and if steep enough cause rapids.

Even according to petitioner's own listing of what it calls the "principal obstructions on New River between Hinton, West Virginia, and Allisonia, Virginia" (Pet. Br., 48, footnote), only two falls are in the lower (Hinton-Round Bottom) stretch, and two in the upper (Radford-Allisonia) stretch, whereas in the middle or intermediate (Round Bottom-Radford) section petitioner lists five (viz., Wiley's Falls, Shumate's Falls, Peter Mountain Falls, Big Walker Mountain Falls and Barnette's Falls). To be sure, the middle section is longer than the adjacent stretches; however, petitioner, in reciting the "principal obstructions" in that middle section, has omitted reference to Snidow's Falls where Hutton proposed a total of seven dams *(Ex. 190)*; to Sifford's Falls (the worst impediment of all involving a 2¼ mile stretch with a total fall of about 23 feet), and to the Pepper series of falls (where Hutton proposed six dams). An addition of these would make a total of eight[1] "principal obstructions" within the middle section or four times as many as in either the upper or lower stretches.

Still another reason for greater impediments in the middle section lies in the geographical and geological conditions. The river at Sifford's Falls and Shoals is from 1100 to 1700 feet in width (*Ex. 190*, sheet 6), the greatest anywhere on New River. With the water so spread out and

[1] In this connection, it should be borne in mind that the "principal falls" recited in the Moore & Briggs survey of 1919 (quoted at Pet. Br. 41) includes only those as far upstream as Sinking Creek. Thus, as concerns the middle section, the Moore & Briggs recital stops short of Big Walker Mountain Falls, Sifford's Falls, Barnette's Falls and the Pepper series of falls.

the steep slope that obtains, it is obvious that there is scant depth, where any, over the innumerable ledges that cross the stream (*Ex. 273*, Photo 46). Certainly the District Court properly implied that there were steeper shoals in the 60 mile middle section than in the section below Round Bottom.

Turning to the observations of the Court of Appeals, which, in its general discussion of the physical characteristics of the river, stated:

> "The gradient, slope or fall of the bed of New River is *not uniform*[1] throughout its course *but varies* from 3 to 4 feet per mile to at places 31 feet per mile" (R. 2895).

it can be seen that the Court's statement is amply borne out by petitioner's own Exhibit No. 145 wherein the United States District Engineer says:

> "From its source at about elevation 3,800 to its mouth at elevation 652, the New River has a total fall of 3,148 feet in its length of about 341 miles, or an average slope of 9.2 feet per mile. The average natural slopes of the New River are as follows:

	feet per mile
From the source of the South Fork to the junction of the forks (86.4 miles)	15.1
From the source of the North Fork to the junction of the forks (41.5 miles)	31.5
From the junction of the forks to Washington Mills (48.2 miles)	6.5
From Washington Mills to the Wythe-Carroll County line (13.8 miles)	15.2.
From the Wythe-Carroll County line to the mouth of the Greenbrier River (128.9 miles)	4.8
From the mouth of the Greenbrier River to the mouth of the New River (64.1 miles)	11.1" (R.2703)

[1] All italics are supplied unless otherwise specifically indicated.

Similarly the Circuit Court's opinion, with reference to the 111-mile reach of river which petitioner now claims is navigable, and which states:

> "It is said (by petitioner) there was an ample volume of water, and the gradient or slope of the river was on the average not much steeper than in the sections which were improved, and that the pools were much greater in extent than the rapids. But the obstacles to navigation consisted chiefly in the falls and rapids which were numerous and long; and the *slope was not uniform,* but very much greater than the average in many places."[23]

[23] "The mile-by-mile survey reached Radford coming down stream at about the fortieth mile. Thereafter for illustration some of the more difficult obstacles to navigation shown in the survey in various places reads as follows:

'49th mile. Rapids and shoals (mostly over bowlders) 2000 feet long; fall, 4 feet.

'51st mile. Rapid, over bowlders and gravel, 1500 feet long, fall, 8 feet.

'53rd mile. At lower end Barnitz Falls, over five ledges of limestone 450 feet, over all fall, 6 feet.

'54th mile. Shoal and rapid over bowlders and gravel 800 feet long, fall 4 feet.

'67th mile. Shoals continue for 1,600 feet; then a short pool and Walker's Mount Falls, where the river falls 5 feet in 500 feet, over two ledges of shale and metamorphic limestone.

'68th mile. Continuous ledges of 4,000 feet; fall 8 feet.

'74th mile. Snidow's Falls, 2000 feet in length; over bowlders and gravel, fall, 5 feet.

'79th mile. Rapid over two ledges, 500 feet long; fall 7 feet; swift water whole mile.

'92nd mile. Peter's Mountain Falls, where river falls 4½ feet in 1,300 feet, over a succession of limestone ledges, terminating in an abrupt fall of 5 feet.

'100th mile. Neilley's Falls and rapids; whole fall 11 feet, 6 of it nearly vertical. A sluice 500 feet long, along left bank, will pass them, with 50 feet of rock excavation and 450 feet of bowlders and gravel.

'104th mile. Commences with shallow riffle, 600 feet long, over bowlders and gravel, and following this occurs Wiley's Falls where the river falls 4 feet in 10 feet, over a limestone ledge about 50 feet wide.'" (Opinion of C. C. A., R. 2900-01; 107 F. 2d, 769, 785-6.)

is clearly substantiated by the evidence.

Certainly, in light of the foregoing, respondent is at an utter loss to understand how petitioner has the temerity to state that the Circuit Court of Appeals was unfair when it stated that the slope of the river was "very much greater than the average in many places" (Pet. Br., 64, footnote 36; 107 F. 2d, 769, 785) and that the average gradient was 7.1 feet[1] per mile (R. 2895).

Indeed, the courts below were not unfair to petitioner, but rather petitioner, by its assertions, has been unfair to the courts. To illustrate, petitioner quotes (Pet. Br. 67-8) three extracts from the mile-by-mile survey (Ex. 31; R. 2282) which are as follows:

> "67th mile. Shoals continue for 1,600 feet; then a short pool and Walker's Mount Falls, where the river falls 5 feet in 500 feet, over two ledges of shale and metamorphic limestone".
>
> "68th mile. Continuous ledges of 4,000 feet; fall 8 feet."
>
> . . . . .
>
> "92nd mile. Peter's Mountain Falls, where river falls 4½ feet in 1,300 feet, over a succession of limestone ledges, terminating in an abrupt fall of 5 feet."

These, as well as eight other illustrations, were likewise quoted by the lower Court (R. 2901; 107 F. 2d, 769, 785-6; see page 13 hereof), to show that the "slope was not uniform, but very much greater than the average in many places" (R. 2900-1). Petitioner erroneously states that these three are "the most extreme of the eleven exam-

---

[1] However, this is not the slope for the "entire river" (Pet. Br. 64). The words "entire river" are petitioner's words, not those of the court. An examination of the Court's opinion discloses that in giving the gradient of 7.1 feet per mile the Circuit Court was speaking of the 252-mile reach from the mouth of a tributary, the Wilson, to the mouth of the New River, which gradient is conceded to be correct by petitioner's statement that: "The average slope from Wilson Creek (at mile 252) to the mouth of the river is 7.1 feet per mile."

ples quoted by the court below" (Pet. Br. 67). However, an examination of the court's opinion shows that it referred to others just as extreme; for example, the fall in the 51st mile, the description of which was quoted by the court from the Hutton survey (Ex. 31, R. 2277) is just as extreme as that in the 68th mile which petitioner has selected:

> "51st mile. Rapid, over bowlders and gravel 1500 feet long, fall, 8 feet" (R. 2901).

and the fall in the 100th mile[1] of *11 feet* clearly belies petitioner's statement that it has selected, for the purpose of its comparison, the three most extreme examples quoted by the Court of Appeals.

However, petitioner egregiously misrepresents the opinion of the court below, when it (a) trims the 60-mile middle section, discussed by the courts below, down to 56 miles so as thereby to eliminate Wiley's Falls from that section, (b) expands unwarrantedly the 23- or 24-mile Hinton stretch to 27 miles so as to include Wiley's Falls in the Hinton stretch and (c) then predicates a third misrepresentation on the already double error by implying to this Court that the lower stretch which petitioner has thus expanded is the same lower stretch that the courts below (according to petitioner) inferentially held navigable and that such lower stretch contains obstacles equally as formidable as the obstacles noted by the court below in the middle section, citing the 104th mile which contains Wiley's Falls to demonstrate the point (Pet. Br. 68-69); whereas actually the 104th mile was one of the very obstacles listed by the court below in support of its conclusion that the slope in the 60-mile middle section was very much greater than the average in many places (R. 2901, last footnote on that page). Petitioner's multiplicity of misstatements

---

[1] "100th mile. Neilley's Falls and rapids; whole fall 11 feet, 6 of it nearly vertical. A sluice 500 feet long, along left bank, will pass them, with 50 feet of rock excavation and 450 feet of bowlders and gravel" (R. 2901).

and misrepresentations in connection with its comparison of the middle section with the lower completely disqualifies it as being entitled to criticize anyone, let alone a court, on the score of fairness.

However, on the main point of gradients, the report of the United States Assistant Engineer, N. H. Hutton, of December 17, 1872 (R. 2280-9), together with the subsequent report of Major William P. Craighill of January 9, 1873 (R. 2295-8) are noteworthy. They contain estimates of work and cost for two assumed depths of "navigation", viz., (a) a depth of 2 ft. and (b) a depth of 3 ft. For the former it was assumed that there would be required only the excavation of sluices through the falls, shoals and rapids.[1] For the latter it was reported that various structures would be required and comparison of the estimated structures as between the several sections bears strikingly upon the demonstration that, as compared with the adjacent sections, the middle section was far less susceptible to use for water transportation and far less susceptible to improvement so as to permit such use.

The structures for the 3 feet navigation contemplated low dams and also at the more critical places some locks. In general, the dams were intended to concentrate the water at and through the sluices at the falls, shoals and rapids but in connection with the locks or certain by-pass canals, the dams would have had the normal function of dams in a canalized stream, viz., of creating depth over ledges and shoals. The dams which were proposed to be in connection with sluices extended in the main entirely across the river (except, of course, at the sluices themselves). However, at certain other places the dams were to extend only part way

[1] The fact that Captain Cuyler subsequently found after two seasons of federal work on the river that it would be necessary to abandon the idea of excavating sluices (R. 2340) and "to adopt a more general and radical method" of improvement (Report C. of E. 1879; R. 2340) consisting of dams and "locks and dams" at "the main falls" (R. 2340-1) in order to attain even the two foot depth, does not vitiate the comparison.

across the river, thus in effect being wing dams. For purposes of comparison, we take into account only those wing dams which, together with any connected islands, were to extend at least half-way across the river. On such basis, this comparison is as follows:

	Approx. Length in Miles	*No. of Complete Dams*	*Wing Dams at least halfway*	*Locks*
Lower Section: Hinton (Mouth of Greenbrier River) to Round Bottom, West Va.	24	12	2	None
Middle Section: Round Bottom, West Va. to Radford, Va. (New River Bridge)	60	41	6	8
Upper Section: Radford to Allisonia, Va.	27	15	1	2

The locations of the proposed dams and locks, as well as of any canal (as at Sifford's Falls in the middle section), are shown in red upon [redacted] the maps accompanying the Craighill-Hutton report (*Ex. 190*). The dams at the locks were to have an average height of 6 feet (R. 2297) and the locks were to have varying lifts. Thus the lock at Barnett's Falls, not far below Radford, was to have a lift of 6 feet, and the two locks between Glen Lyn, Va. and the State line, i. e. at Shumate's and Wiley's Falls (at the State line), were to have lifts of 5 feet each. Locks are expensive both to build and also to maintain and operate. Obviously, the locks were proposed only for the places which these United States engineers considered to be the *major impediments* to navigability. Thus the absence of any estimated requirement of a lock and dam in the lower section; i. e., anywhere downstream from Round Bottom, West Virginia, speaks strongly of the less obstructive physical characteristics in the lower section (Hinton-Round Bottom) as compared with the middle section (Round Bottom-Radford).

To be sure, the attempt actually to attain a depth of 9 feet throughout the lower section of the river was not successful (see pages 80-83 hereof) and therefore there is no justification for assuming that the dams estimated by Hutton to be necessary for 3 feet depths would have accomplished the intended purpose had an attempt actually been made to create navigability in the middle section by such means. Nevertheless, this consideration does not vitiate the comparison between the physical obstacles to navigability existing in the respective sections as estimated by Hutton following his survey in 1872.

Furthermore, the reports of other Army Engineers also make clear that the obstacle of gradient is such as not only to make impractical useful navigation but also to make it economically unjustified to create artificial navigability on the river. On this subject the Board of Engineers for Rivers and Harbors reported (Jan. 11, 1935):

> "None of the tributaries (of the Kanawha), because of their unfavorable natural characteristics are suitable for development for navigation, although prior to 1902 the United States expended funds intermittently on some of the tributaries to facilitate rafting and shallow-draft navigation.
>
> * * * * * *
>
> "Because of the *steep slopes* of the tributaries their improvement for navigation either as a separate undertaking or in combination with power development or flood control, is not *economically practicable*" (Ex. 145; R. 2684, 2687).

(e) Velocities.

Owing to the steep gradient of the river, which throughout its course averages 9.2 feet per mile (Ex. 145; R. 2703), it is obvious that velocities—"at about the rate of 3 miles per hour" over the rapids at the ledges and shoals and "at about the rate of 5 miles per hour" over the falls (Ex. 35; R. 2350)—would of themselves preclude continuous navigability-in-fact. Only with a high degree of canalization b

means of a series of locks and dams could the effect of the swift current have been overcome.[1]

This discouraging aspect of the work of attempted improvement was a cause of concern to the army engineers almost from the beginning.

Captain Cuyler, for example, considered the matter of velocities in making his report of July, 1878. He there stated he had made a series of gagings

> "at and below Ingle's Falls, this point being chosen not so much with an eye to the regularity of river section, but because it was the most serious obstacle to navigation, on the line of the season, and was a *characteristic type* of that class of obstructions— * * *" (Ex. 34, p. 497; R. 2330).

He found the "mean velocity of the river at this point to be about 5¼ miles" per hour when the discharge was 900 c.f.s. (R. 2331). Apparently he was dubious as to the prospect of overcoming the obstacles presented by the swift current of the river by the type of work then being carried on, for, after a description of the regimen of the river, he states

> "With such a regimen any improvement made as to deepening and widening the channel introduces the *new obstacle of largely-increased velocity* and volume; so that though the main and more important navigation of this river must ever be that of descending boats, *yet no scheme* of improvement can fully *meet the requirements* of the case *without* considering and aiming to *counteract* this *induced obstacle* to navigation" (id. p. 498; R. 2332).

---

[1] While in canalizing a river for commercial purposes current velocities in excess of 3 miles per hour are not considered tolerable, nevertheless it is undoubtedly true that a river vessel of sufficient horsepower could ascend a current of 5 or 6 miles per hour (Pet. Br. 64). This entirely disregards any factor of commercial feasibility and the more important factor of "squat" which, in view of the grossly inadequate depths, makes it simply absurd to consider velocities from the standpoint of what a power-driven river vessel could do on New River.

However, he found no way of overcoming this obstacle other than by recommending a radically different type of improvement—necessary in his opinion "not only for the contemplated steam-navigation, but *even* for the *bateau* navigation and rafting" (Ex. 35; R. 2340)—stating that *even* with the open sluices

> "some system of *towing up* ascending boats, by *cables* on the bottom, the motor being steam or air, located on the banks, or better, on large floats fixed in the still upper pools, will, in my judgment, be *found essential.*" (Ex. 35; R. 2341-2).

A. M. Scott and William Proctor Smith, assistant engineers, each subsequently in immediate charge of the federal work, for different periods, likewise thought that the expedient of using cables for towing or ropes on which the steamers could "wind", should be resorted to, and they so reported to their superior, Colonel Craighill. Scott stated:

> "Steamers will be obliged to 'wind' through some of the chutes and must be provided with steam capstans for this purpose." (Ex. 35; R. 2346).

Also that:

> "It is thought a permanent winding-line or wire-rope will be advisable at this shoal (War Ford), and some arrangement of this kind is likely to be found *expedient* at *other points*" (Scott to Craighill, May 26, 1879, Ex. 35; R. 2347).

And Smith wrote that:

> "Ring-bolts, to which lines are attached to 'wind' through the difficult 'chutes' have been placed at frequent intervals" (Ex. 36; R. 2367).

However, their superior, Colonel William P. Craighill, did not share their optimism, he being of the view that the hauling of boats over steeper places would be unprofitable

and unsatisfactory. On this subject he reported to the Chief of Engineers, as follows:

> "More mature reflection, with a study of the results of the survey, induces the conclusion that a steamboat navigation, *impeded* by the *necessity* of *hauling up the boats* over the *steeper places*, would be *unprofitable* and *unsatisfactory*, and that for steam navigation to be efficient *such drawbacks must be done away with*" (Col. Craighill to General Humphreys, Jan. 9, 1873, Ex. 31; R. 2296).

It would appear that Colonel Craighill's judgment was correct, for despite Smith's optimistic report to the effect that the S. S. *"Cecilia Miller"* "'winds' through (Bull Falls) without difficulty," nevertheless it is to be noted that in the course of a season or two this boat had been withdrawn (Report of C. of E. 1882, Ex. 38, R. 2383). Incidentally even Smith stated that

> "Owing to the strong current it was very difficult to make the shelter-dams stand in these falls" (Ex. 36; R. 2367).

The swift current of the stream also caused trouble in connection with attempts to transport pig-iron on the middle division of the river. The work on that division resulted in a channel only 10 feet in width for over one-half of the 29¼ miles which it covered. The channel was never widened, although the engineers reported

> "Ten-foot channels are not wide enough, as the current is too rapid for the boats in use" (Ex. 38; R. 2387).

Thus the velocity of the current, while only one of the obstacles to navigability-in-fact, was nevertheless a perplexing one which the Army Engineers did not succeed in overcoming in the attempt to create artificial navigability on New River.

As though they were significant, petitioner makes reference (Pet. Br. 65) to so-called *measurements* as to depths, widths, velocities, etc. made, in the midst of the trial of this case, by its witness Gerdes. However even though these Gerdes measurements are set forth in tabular form (Pet. Br. 70) and in precision terms, i. e., depth and velocity measurements are carried out to one decimal point, nevertheless, the fact is that Gerdes, even on his own statement, did not purport to do a precision job. He did not make an instrument survey. Instead, his *measurements* were largely mere estimates made from the bank (R. 929) after he had prepared himself for this task by "sharpening his judgment". As he states it:

> "Now when I started in I spent quite a bit of time on Wiley's Shoal and at Shumate's Fall, I spent some time *fooling around there* and *sharpening up my judgment* as to the depth of the water from its appearance, and that is a specialized kind of judgment that can be acquired in a couple of days, and lost just as quickly[1] but I did that. As I went along I used that knowledge as to each shoal, one, two, three, and when conditions were the most important, then I would go out to these one, two, three or four places and make actual measurements" (R. 930).

However, Gerdes' method of measuring the velocity in many instances in which he actually went down to the water and made what he refers to as "actual measurements" was as follows:

---

[1] This brand of *sharpened judgment* which "can be acquired in a couple of days and lost just as quickly" apparently differed from that brought into play by Gerdes in the case of estimating velocities, for, although in the latter case Gerdes also stated that "it will have to be kept sharpened" (R. 933), nevertheless when it came to making his "measurements" he did not regard the fact that he had not used his *sharpened judgment* for a period of a year as a disadvantage, because, as he explained it, this latter brand of sharpened judgment "is like swimming—once learned, it is not easily forgotten" (R. 933).

> "I measured the velocity near the side and then tossed chips into the stream where the maximum thread was and observed the ratio of flow, as to whether it was 120, 130 or 150% in comparison" (R. 933).

Yet, despite the fact that Gerdes was merely *estimating* velocities—by *estimating* how much faster the water was flowing at the place in the stream that he *estimated* to have the maximum velocity than it was flowing at the side of the stream where he was standing—petitioner, in an effort to place a halo of scientific and mathematical accuracy upon these *estimates*, has set them forth in tabular form and carried them out to one decimal point, thereby superficially conveying the impression that Gerdes made precision measurements. The character of this "measurement" work, plus the fact that Gerdes was obviously a very strongly biased witness vitiated the value of Gerdes' testimony. Even in his testimony with respect to current velocity, and after stating with regard to a particular shoal that the current "was more than it appeared a man could stand up in while holding a current meter", he was unwilling to admit that it was "unsafe" and again, he would not admit the current was "hazardous" even if one of his own party, in an effort to make a mid-stream measurement, were washed downstream and had to have a rope hitched around him to pull him out (R. 934).

Questions directed to the reason for his failure to make measurements in mid-stream—where the current was swift and the answer obvious—received such responses as these:

> "it cost a number of dollars a day in expense to do the work and *there was no use wasting time around there*" (R. 934).

or

> "I regarded it to be most practical to measure *where I did*" (R. 934).

It was such of petitioner's witnesses as Gerdes—who testified on a variety of subjects—including power waves, that undoubtedly prompted this (very mild under the circumstances) observation on the part of the trial court:

> "I think it necessary to say that the witnesses who furnished the bulk of plaintiff's testimony on the subject of power waves displayed a bias, an evasiveness and an unwillingness to admit even obvious facts hostile to their contentions, to such an extent as to deprive their testimony of much value" (R. 130-131).

The testimony that respondent has cited as to depths, velocities, etc. is from the reports of Army Engineers made prior to the trial of this case and not in a spirit of partisanship or in the heat of advocacy.

(f) Photographs of Ledges and Shoals.

Petitioner is critical of respondent's photographs, apparently because they show ledges and shoals exposed which at high water might be submerged partially or wholly (but not sufficiently, from the standpoint of navigation) (Pet. Br. 72). Petitioner seems to prefer its own photographs because they largely show pools or in some instances falls, taken from such a distance that they are scarcely discernible. While vitally affected by other physical characteristics such as slope and velocity, the effect of ledges, shoals and falls manifestly depends in a large degree upon their frequency and extent. Photographs of pools are manifestly irrelevant and of no value; for as petitioner stated before the Trial Court:

> "In litigating the issue of navigability, attention naturally turns to the shoal portions of a stream as distinguished from the pool sections" (Pl. (Pet.) Br. before District Court 132).

Petitioner's satisfaction with certain of its photographs, in which the ledges and rocks are covered by the water,

arises from petitioner's failure to realize that submerged and partially submerged ledges and boulders make navigation even more hazardous and impractical than those which are exposed (Pet. witness Lt. Col. Watkins, R. 968; Major Putnam, R. 1785). Actually (if it were practicable), one of the best ways to reveal the character of the river bed particularly the rocks and ledges, which at other times, are dangerously submerged, would be to take photographs at times when the river is practically dry.

Something of the character of the rocks, ledges, shoals and rapids which abound in New River can be gathered from an examination of the photographs offered by the respondent (Resp. (photo) append. B; *Ex. 549; Ex. 554; Ex. 555;* and *Ex. 592*). Perhaps none are more striking than those offered by the witness Prof. Matthews (*Ex. 549*), which were not taken for the purpose of this case but as a part of his official geological studies of New River in behalf of Virginia Geological Survey. One has only to examine these photographs to realize that the character of the upthrust rock ledges, boulders, rapids and shoals relegate any claim of navigability to the field of fancy.

Again, petitioner states (Pet. Br. 72) that:

> "The real condition as to navigability can, in truth, be determined only from petitioner's aerial photographs".

In this connection, it should be noted that petitioner's aerial photographs, taken at approximately average flow, not low flow (*Ex. 273; Ex. 69*), do not cover all of the pertinent portions of New River. For instance, in what we style the 60-mile middle or intermediate section, Round Bottom, West Virginia-Radford, Virginia, the length of river covered by the aerial photos (*Ex. 273*) is only 79% of the total length of that section. Moreover, a considerable part of the 79% comprehended within the field of the respective photos was so distant from the camera, or taken at so flat an angle or so obscured by shadows, that for prac-

tical purposes it is useless. After deducting for such part of the 79%, it may reasonably be said that the aerial photos of *Ex. 273* show only about 70% of the length of the middle section.

Among the impediments to navigability which are not covered by, or visible upon, these aerial photos are such as Barnett's Falls (Resp. (photo) Append. B, No. 54), Lower Pepper Falls, rapids in vicinity of Berton, Va., rapids at Pearis Island, Bluff City, etc. Not all of such impediments (not visible upon petitioner's aerial photos) are covered in Respondent's (Photo) Appendix B, and some are not shown by any ground photo in the record, but the point is that petitioner's aerial photos by no means cover the river, particularly the middle section, completely.

The detail of the petitioner's aerial photos is far less than that of the ground-photos, due to the fact that the aerial photos were taken from far greater distance and from the fact that such distance involved great height. Moreover, even in the cases of ground photos, one needs to bear in mind the belittling effect when, as is true particularly of various of petitioner's photos, the photos are taken from a considerable distance downstream and the further fact that, if the photos are taken from upstream, they may fail entirely to show a rapid or falls of importance (e. g. Little Pepper Falls, per petitioner's *Ex. 193*, Photos 34 and 35).

Respondent's (Photo) Append. B (comprising 55 photographs) relating to the middle or intermediate section of New River, between Round Bottom, West Va. and New River Bridge at Radford, Va., by no means constitutes a complete record of the important obstacles to navigability within that section. The total number of falls or series of rapids shown in Resp. (Photo) Append. B is 50. This number obtains after allowing for the following partial duplications:

Name of Impediment	*No. of Photos*
Wiley's Falls at State Line	3
Shumate's Falls below Glen Lyn, Va.	2
Principal Falls at the Narrows	2
Big Falls at Walker Mountain	2

There are between Round Bottom, W. Va., and New River Bridge at Radford at least 70 falls, shoals or rapids, the existence of which is shown by the photographs[1] in the record, the Hutton survey-map (*Ex. 190*) or the U. S. Geological Survey Map, Peterstown Quadrangle (*Ex. 185*), and of which Resp. (Photo) Append. B, as above stated, shows only 50. Petitioner's aerial photos (*Ex. 273*) show only 48, while petitioner's witness Gerdes listed only 41 (Pet. Br. 70).

The following are a dozen of the more important falls, shoals or rapids of which no photographs are included in respondent's photo appendix:

1. Cooper's Falls, at Cooper's Branch, being about half way between the State Line at Wylie's Falls and Glen Lyn: These appear in aerial photo 57, Ex. 273, lower left corner. See also the Hutton map, Ex. 190, Sheet 9.

2. East River Falls, about one-quarter mile below Glen Lyn, Va.: See Aerial photo 57, near top thereof; see Hutton map, Sheet 8. For this point Hutton considered a *dam* necessary if 3 ft. depth was to be attained in the sluice to be constructed (ibid; R. 2279).

3. Rapids at about mile 103 (above mouth of New River): These rapids are shown even on U. S. G. S. map, Narrows quadrangle, but appear only indistinctly on aerial photo 52. They were recognized by petitioner's witness Gerdes; shown on Hutton map, Sheet 7.

---

[1] Of course this does not mean that there are merely 70 obstructions; for example, even on aerial photo 46 (Pet. *Ex. 273*), one can count fully 50 separate lines of ledges (not including Walker Mountain Falls) in a river distance of approximately 2 miles.

4. Rapids approximately one-half mile upstream from preceding item: Shown on U. S. G. S. Narrows quadrangle; on aerial photo 54, upper left corner, but only indistinctly on aerial photo 52; and on Hutton map, Sheet 7.

5. Rapids at Klotz, Va.: Shown on aerial photo 50, Hutton map, Sheet 7.

6. Walker Creek Rapids: Shown on Hutton map, Sheet 7. Hutton proposed *three* dams within distance of 0.3 mile. There is no aerial photo of this stretch of river.

7. Rapids just below mouth of Little Stony Creek: Shown at island at left on aerial photo 49 and on Hutton map, Sheet 7. Hutton proposed *wing dams* here.

8. Eggleston's Shoals: Shown on aerial photo 47, right side, also on Hutton map, Sheet 6. Hutton proposed a *dam* here.

9. Rapids about ¼ mile upstream from Barnette's Falls: They were not reported on by petitioner's witness Gerdes. However, they are shown upon Sheet 5 of the survey map by Hutton, who considered that a *dam* would be necessary here.

10. Lower Pepper's Falls: No photo of this series of ledges and rapids is in record, but falls were purportedly reported on by petitioner's witness Gerdes (R. 924). Shown on Sheet 5 of map by Hutton, who proposed *two* dams here.

11. Upper Pepper's Falls: Comprises all of the ledges and rapids shown in middle of aerial photo 43; shown also on Sheet 5 of map by Hutton, who estimated *four* dams necessary here.

12. Rapids at Radford: This series of ledges and rapids shown on aerial photo 42; also on Sheet 4 of map by Hutton, who estimated *three* dams necessary here.

Respondent welcomes any comparison which the Court will make between the aerial photos of petitioner and respondent's photos. However, any such comparison should be made between Pet. Appendix Volume III (reasonably good photostats) and the corresponding photos in

Resp. (Photo) Append. B (largely photo-prints, supplemented by relatively good photostats)—and *not* Pet. Appendix Vol. V (poor photostats) as requested by petitioner (Pet. Br. 72, footnote).

(g) Ledges and shoals—their character and extent.

Petitioner introduced in evidence as a part of its case a report made by the U. S. District Engineer (Ex. 145, R. 2710) which included the following as a part of the general description of New River:

> "Ledges of limestone, sandstone, and shale crossing the river at frequent intervals create rapids and waterfalls. The waterfalls vary in height up to about 18 feet. Between the ledges there are usually short pools of varying depths. The low water depth in the channel varies from a few inches to more than 6 feet."

This description was quoted by both the Trial Court and the Court of Appeals as part of their respective opinions (R. 108; 2898). Petitioner in the C. C. A. has specified this description as error (R. 163). However, even if, contrary to the fact, the other evidence in the case did not amply support this part of the opinions of the courts below, nevertheless there could be no justification for petitioner's complaint concerning this portion of the courts' opinions when it is substantiated *in haec verba* by petitioner's own evidence (Ex. 145, R. 2677, 2710).

Again, petitioner has heretofore asserted that there is no "abrupt vertical fall" in the middle section of the river, citing (App. (Pet.) Supp. Br., in C. C. A. 191) the Hutton report (Ex. 31, R. 2280). Of course, the significant consideration is the presence of ledges, shoals and falls, not whether the water falls over them vertically or falls over them at a 45 degree or a 30 degree angle. Nevertheless, a reading of the very Hutton report which petitioner has heretofore cited as its authority would have disclosed that there are *abrupt vertical* falls of water in the very reach of the river

in which petitioner stated that there were none. For example, Peter's Mountain Falls is to be found in this middle section of the river. Hutton describes it as "terminating in an *abrupt* fall of 5 feet" (Ex. 31; R. 2286). Also, in the case of Neilley's Falls and rapids, Hutton states the whole fall is "11 feet, 6 of it nearly *vertical*" (Ex. 31; R. 2286).

Moreover, in the same report Hutton, referring to means of improvement, speaks of making improvements by clearing sluice-ways through the shoals and rapids "and by opening through the *vertical* falls and ledges sluices with a slope not exceeding 1 to 10"; (Ex. 31; R. 2288). In the same report of the Chief of Engineers, Major Craighill, speaking of methods of improvements, states:

> "Some of the falls which are almost always *vertical* and of an average height of about 4 feet, could be greatly improved by blasting sluices * * *" (R. 2279).

Thus, it may readily be seen that even petitioner's statement, that the term "falls" frequently used in the descriptions and surveys of the river does not refer to vertical falls, disregards the fact.

Petitioner, disturbed by the prevalence and problems of rock ledges, rapids, shoals, and obstructions in New River, has heretofore undertaken to show that ledges and shoals comprise only about 15% of the river bed. It endeavored to substantiate this by referring to the mile-by-mile survey (App. (Pet.) Br. in C. C. A. 22) made by Hutton in 1873 (Ex. 31, R. 2282) and by citing the testimony of its witness Gerdes.

With respect to the former, petitioner's assertion was that Hutton's report gives sufficient detail to enable one to calculate that the section of the river from Pine Creek to New River Bridge contains 18.7% of shoals and ledges, that the section of the river from New River Bridge to Wiley Shoals contains 14.5% of shoals and ledges, and that the section of the river from Wiley Shoals to the Greenbrier

River contains 15.9% of shoals and ledges. However, an inspection of Hutton's report (Ex. 31, R. 2282) reveals that it does not afford the basis for such calculation for the reason that the lengths of *all* shoals and ledges are not given. While in many instances the length of shoals or ledges is given,[1] nevertheless, in other instances, Hutton did not purport to give the lengths but merely noted the existence of a ledge or shoal.[2]

With regard to the testimony of petitioner's witness Gerdes—one of the Federal Power Commission's employees who during the trial testified several times on several different subjects and who served petitioner in the capacity of a handy all-purpose witness—to the effect that the river consisted to the extent of about 15% of ledges and shoals and the echoing of this percentage figure by petitioner's witnesses Watkins and McWhorter—without a shadow of support for their views other than the estimates made by Gerdes based on his own "sharpened judgment", it will be noted that such testimony cannot be reconciled with the Reports of the Chief of Engineers. The latter, made long before the present litigation and not in a partisan

---

[1] For example:

"14th and 15th miles. Consist of shoal rapids for 9,000 feet, falling over 16 ledges of shale and limestone about 12 feet vertical."

"17th mile. A succession of 9 ledges 2,000 feet over all; fall, 5 feet."

[2] For example:

"23rd mile. Wide and shoal; river falls over 6 ledges; will require some work the whole distance; fall, 9 feet."

"24th mile. River narrowing, but still falling over ledges of limestone and shale; about six ledges crossed, 7½ feet fall."

"29th mile. River falls 8 feet over a succession of 9 ledges of shale."

"45th mile. 7 ledges; fall, 7 feet in 1000 feet."

"56th mile. 2 ledges very narrow; fall, .5 feet."

"65th mile. Continuation of Sifford's Shoals; river very wide and shallow; fall, 10 feet, over slate ledges about 200 feet apart, with 3 feet water between them."

atmosphere, show that the ledges and shoals prevailed throughout more than one-third of the reaches of the river under improvement[1] and that the depths (not low water depths) over the ledges and shoals were *"rarely over one foot"* (R. 2382).

The extent of ledges and shoals is disclosed by the reports of the Army Engineers. During the course of the federal work, done on the 26½-mile reach of the river above Hinton, it was found that more than 9 miles. (*actually 47,875* feet[2]), or approximately 34% of this 26½-mile reach of river bed, consisted of ledges and shoals.

Similarly during the course of the federal work done on the 29¼-mile reach of the river from New River Bridge to about Calfee's Ferry (public), it was found that more than 12 miles (actually 64,131 feet[3]) or approximately 41% of this 29¼-mile reach of the river bed consisted of ledges and shoals.

Also during the course of the federal work done on the 7 9/10-mile reach of the river from the Lead Mines to the "Gulf" it was found that more than 3½ miles (actually 17,572 feet[4]) or 44% of this 7 9/10-mile reach of the river bed consisted of ledges and shoals.

---

[1] Which improvement "was limited to the most easily improved places" on "3 widely separated stretches with long unnavigable reaches between them" (General Taylor, C. of E., *Ex. 572*, same text as Ex. 97, R. 2531).

[2] This figure appears in the report of the Chief of Engineers for 1883 (Ex. 39, R. 2398) where the extent of the actual cutting from ledges and shoals on that 26½-mile stretch of river is referred to as follows:

"*Actual cutting* through ledges 47,875 feet."

This figure also appears (Ex. 39, R. 2402) in the same report under the column headed "Length" of the Table No. 1.

[3] This figure appears in the report of the Chief of Engineers for 1883 (Pl. Ex. 39; R. 2403) under the column headed "Length" of Table No. 2.

[4] This figure is obtained by adding the figure of 15,840 feet, appearing under the column headed "length" of the table ap-

(*Footnote continued on next page*)

The mile-by-mile survey made by Hutton in 1872 (Ex. 31, R. 2282 et seq.) of the 128-mile reach of the river between Hinton and the Lead Mines indicates that, for the 26½-mile and the 29¼-mile reaches of the river on which the federal work was done, ledges and shoals were at least not more prevalent and apparently were less prevalent than in the balance of the 128-mile reach on which no work was done.

Furthermore, the mile-by-mile survey made by Smith in 1878 (Ex. 35, R. 2351) of the 62-mile reach of the river from the Lead Mines to the mouth of the Wilson in Grayson County, indicates that the same may be said as to the relative prevalence of shoals and ledges as between the 7 9/10-mile reach of the river above the Lead Mines on which federal work was done and the balance of this 62-mile reach on which no work was done. Hence it may be stated conservatively that more than ⅓ of the river between Hinton and the mouth of the Wilson consisted of ledges and shoals. It borders on the absurd to urge that a river so obstructed is navigable in fact, particularly in view of the limited depth over the ledges and shoals—"rarely

---

pearing in the Report of Chief of Engineers for 1890 (*Ex. 563*, p. 2251) entitled:

> "Statement showing the distances from Ivanhoe Furnace, Virginia, to foot of shoals or ledges, their length and difference of level between head and foot of same; also the quantity and quality of material excavated in making and improving the channel in 1899 from Ivanhoe Furnace, Wythe County, to the Gulf in Carroll County, Virginia."

to the figure of 1,832 feet, which is the sum of the lengths of the first four ledges and shoals listed in Table No. 3 appearing in the report of the Chief of Engineers for 1882 (Ex. 38; R. 2390). The report for the year 1890 listed shoals and ledges beginning with Ivanhoe Furnace instead of the Lead Mines as the initial point. Hence the length of the four ledges and shoals immediately above the Lead Mines was not included in the figure given in the 1890 report; therefore, their combined length of 1,732 feet must be added to the figure given in the 1890 report, viz., 15,840 feet, in order to give a figure representing the total length of shoals and ledges from the Lead Mines to the "Gulf".

over one foot''—hereinafter discussed at pages 36-38 *infra.*

Petitioner has heretofore complained that, in arriving at the figure of 64,131 feet as representing the total length of ledges and shoals on the 29¼-mile reach of river covered in the federal work (New River Bridge Division), respondent had included two ledges, viz., Howard's and Moore's, having a length of 4200 and 2200 feet respectively upon which little or no federal excavation work or ''actual cutting'' was done. While such a complaint could only arise from a misconstruction of what respondent had stated and a misconception of that which is *significant,* nevertheless we desire to make respondent's position abundantly clear on this point. We do not claim that federal work on the *New River Bridge Division* involved cutting through all of the ledges and shoals shown by the Army Engineer's Report in the 29¼-mile reach of that Division.

What respondent states is that the reports of the Chief of Engineers show that in the federal work on the *Greenbrier Division* there was a certain amount of ''actual cutting'' through all of the ledges and shoals in the 26½-mile reach involved and that, with respect to the *other two Divisions,* (viz., the New River Bridge and the Lead Mines Divisions) ledges and shoals made up 41% of the 29¼-mile reach of river bed upstream from New River Bridge and 44% of the 7 9/10-mile reach upstream from the Lead Mines. We have not stated that all of the ledges and shoals on the latter (upstream) two Divisions were actually cut through, even though the fact is that the Engineers' Reports show that with the exception of Howard's Ledges and Breeden's Ledges in the New River Bridge Division there was some excavation work at *all* of the ledges and shoals in the reaches of the river worked by the federal government on both the New River Bridge Division and the Lead Mines Division.

However, in so far as excavation work is concerned the total quantity on the New River Bridge and Lead Mines

Divisions was even more scant than that on the Greenbrier Division. For example, on more than ½ of the 29¼-mile reach of the New River Bridge Division, instead of the project widths of 30 feet, there were attempted only 10-foot widths. Such latter widths were reported by the Engineer in charge to be insufficient (Ex. 38; R. 2387). Nevertheless, due evidently to the fact that the excavation work was not progressing in proportion to the mounting cost thereof, it is obvious that certain ledges and shoals received only minor attention or none at all.[1]

The *significant* fact, however, is not the extent to which the federal government either carried out or failed to carry out proposed excavation work but that (a) the river bed —irrespective of work done on it—actually consisted of ledges and shoals to the extent of 34% on the 26½-mile reach above Hinton, 41% on the 29¼-mile reach above New River Bridge and 44% on the 7-9/10-mile reach above the Lead Mines; and (b) the *depth* over these ledges and shoals—and these were not low water depths as petitioner has suggested—*was rarely over one foot.*

However, even if from the 64,131 feet (total length of ledges and shoals on the 29¼-mile reach above New River Bridge) we were to deduct the 2200-foot length represented by the ledges at Moore's Gravel (on which comparatively little work was done), the 4200 feet represented by Howard's Ledges (on which no work was done) and the 750 feet represented by Breeden's Ledges (on which

---

[1] Despite the fact that the Army Engineers' Reports show the percentages of ledges and shoals to be 34, 41 and 44, respectively, on the reaches in which federal work was done that the Chief of Engineers reported that this federal work on New River "was limited to the most easily improved places" (R. 2531), the dissenting judge incorporated in his opinion (R. 2926) the estimate of witness Gerdes, viz., 15% ledges and shoals and 85% pools. Of course the latter was the most superficial kind of an estimate, subject to all of the infirmities which have heretofore been pointed out, see pages 22-24 hereof—in complete disregard of the reports of these Army Engineers.

no work was done), nevertheless we would find the total length of ledges and shoals on that 29¼-mile reach to be 57,181 feet, or approximately 10.8 miles. Thus, *even with the elimination of all ledges and shoals on which no excavation work was done,* we would still find that *the remaining ledges and shoals would aggregate more* than 36% of that 29¼-mile reach.

Of course it should not be overlooked that the effect of numerous ledges, shoals and rapids cannot be appraised without taking into consideration accumulative effect of slope and velocity. Thus, on a stream with a relatively flat gradient, the effect of ledges and shoals would be less serious than in the case of a stream like New River with a very steep gradient and high velocity.

(h) Natural Depths.

U. S. District Engineer Conklin reports in 1934:

> "* * * Between the ledges there are usually short pools of varying depths. The low-water depth in the channel varies from a *few inches* to more than 6 feet" (Ex. 145, R. 2710).

In the record of mile-by-mile survey set forth in Hutton's report to Col. Craighill, December 17, 1872, (Ex. 31, R. 2282), Hutton states that, commencing with the Lead Mines where the river had an average depth of 5 feet, it gradually expands and deepens until an average depth of 6 feet is reached just above the Greenbrier. Of course the reference is to depths in pools.

Smith, who made a mile-by-mile survey in 1878 of the portion of the river between the mouth of the Wilson and the Lead Mines, states that the average depth in the pools at the mouth of the Wilson is 4 feet, and the average depth in the pools at the Lead Mines is 5 feet.

However, the crux of navigation in so far as depths are concerned is the limiting depths over the obstructions, such

as the rock ledges and shoals. On this subject, the report of the Chief of Engineers for the year 1881, states:

> "Throughout this distance (from the mouth of the Wilson to the mouth of the Greenbrier) the navigable channel originally consisted of natural chutes through the *ledges and shoals*, of varying widths, rarely *over 1 foot in depth*, in some places so tortuous as to render navigation extremely difficult and dangerous" (Ex. 37, R. 2376).

Of course, these depths often were actually considerably less than 1 foot. For example, Captain Cuyler in a letter to Colonel Craighill dated March 15, 1879, with reference to Peak Creek Shoals states:

> "the map shows this, the natural channel running for ¾ of a mile over a gravel slope underlaid by flat rock *no lower than 1 foot*, with the river over 400 yards wide, and most of its water in the deep pools barred by ledges on the other (easterly) bank. As was to be expected, *4 to 6 inches* of water was *often alone available*, and no loads at all could get over;" (Ex. 35, R. 2339-40).

When it is borne in mind that more than one-third of the bed of New River consists of *ledges and shoals*, it can readily be seen that the depths in themselves—averaging less than 1 foot through these ledges and shoals—constitute an insuperable obstacle to navigability-in-fact.

Petitioner's assertion—based on the statements of its witness Gerdes whose "measurements" of depth, tabulated at page 70 of petitioner's brief, are subject to the infirmities heretofore indicated,[1]—that natural depths through the ledges and shoals exceed 2 feet except at 2 shoals (Pet. Br. 71), cannot be reconciled with the various reports of

[1] As to Gerdes' "measurements" (see pages 22-24, *supra*), they were largely mere estimates made from the bank (R. 929). They resulted as he said, from "fooling around there (certain falls) and sharpening up my judgment." Only in a few cases did he make actual measurements (R. 930).

the Chief of Engineers made during the Federal work and long before the present litigation and not in a partisan atmosphere, which state that these depths (not low water depths) were "rarely over 1 foot"[1] (Reports of Chief of Engineers 1881, R. 2370; 1882, R. 2382; 1883, R. 2394; 1885, R. 2405; 1886, R. 2407; 1892, R. 2413; 1897, R. 2416).

The foregoing discussion of physical characteristics, as well as other evidence that could be cited, amply substantiates the observations of the Court of Appeals concerning physical characteristics:

> "A mere description of the physical and natural characteristics of the river is very persuasive that it is not susceptible of that character of navigation which is necessary, under the decisions above cited, to support the claim that it is navigable water of the United States. It is properly said to be sui generis, and is unlike many of the numerous rivers which have been described and held either navigable or non-navigable in Supreme Court decisions which we have noted. It is characteristically a mountain stream with steep gradient, relatively rapid current, and comparatively narrow stream bed, the river running in many places over limestone and sandstone, rocks and shale, the boulders frequently jutting above the surface of the water, with alternating comparatively still pools of varying length and numerous rapids, falls and shoals in many of which the depth of the water over the rocks is only about one foot, and frequently only a few inches." (107 F. (2d) 769, 780-1, R. 2893.)
>
> • • • • • •
>
> "Among mountain streams it seems to be unique in the peculiar geologic formation of its rocky bed due to folds and faults in the rock strata, producing ledges running across the stream in many places. In a thirty-five mile stretch of the river in Giles County, Virginia, (an important section in this case, as is

---

[1] However, despite the reports of the Army Engineers, the dissenting judge, adopting Gerdes' "sharpened judgment" estimates of depths, stated in his opinion that there was "a minimum depth of approximately two feet even in low water" (R. 2926).

hereinafter particularly discussed) the geologic environment is 'markedly unusual' in that it has been the scene of four predominant breaks or faults; and the slope or gradient of the rocks in the river bed is very unusual in that the incline 'is downward in an upstream direction rather than in downstream direction', with the result that the water falls over the ledges almost vertically. Some of the ledges are upthrust above the surface of the water, and some are barely submerged, and this relative condition varies naturally with the depth of the water in alternate wet and dry periods. The difficulties and dangers of navigation caused thereby, both downstream and upstream, are obvious." (107 F. (2d) 769, 781; R. 2894.)

2. *The absence of any use of New River for trade, travel or transportation by early traders, industries or even military expeditions, or indeed any use before the experimental local use under the stimulus and novelty of artificial local federal improvements is compelling evidence of its non-navigability.*

(a) History does not record any use of New River as a means of trade, travel or transportation by early settlers, traders or explorers.

Although the petitioner assigned error (amended assignment of error No. 24; R. 165) to the Court's finding to the effect that early historical descriptions of New River by explorers, etc. do not show it available for navigation in its natural state, and purports to discuss the matter of "early navigation" (Pet. Br. 41), it nevertheless will be seen that the Court's finding is not only amply supported by the evidence but that the evidence precluded any other finding.

New River was discovered in 1671 by Col. Abram Woods (Kegley, R. 1581). According to the best available records, settlements were begun in the New River valley in 1744-1745. These settlements were in various places along the Valley, including those in the vicinity of the Horseshoe Bend (below Radford), Bingeman's Bottom and Poplar Camp (below the lead mines), Dunkard's Bottom (above Rad-

ford), Draper's Meadows, Neck Creek and Back Creek in Pulaski County and others along various tributaries of upper New River (Kegley, R. 1581-2).

The earliest record of any attempt to use New River as a means of transportation or travel is the account of the trip of a small party headed by John Peter Sally, who, in 1742, proceeded from a point on New River somewhere west of the natural bridge down to the Ohio River, and who, for part of the trip, attempted to travel on New River in a small boat made from five buffalo hides. His account, although somewhat confused and dealing with a portion of New River well below Radford, does demonstrate the great difficulties encountered. It recites that his party was compelled frequently to take even this small boat from the stream and finally to abandon the River entirely for a distance of more than eighty-five miles. Indeed, it is disclosed that Sally's party did not finally return to the water until somewhere down on the Kanawha River (Kegley; Sally's Journal, R. 1591-3).

In 1756, during the French and Indian War, Governor Dinwiddie authorized an expedition against the Shawnee Indians. This expedition was under the command of Major Andrew Lewis, who assembled the men at Fort Frederick on Dunkard's Bottom. Leaving Dunkard's Bottom on the bank of New River, they went west and overland to Burke's Garden, a point now in Tazewell County, Virginia, and then struck the East Fort (generally known as Tug Fort) of the Big Sandy River which empties into the Ohio. The expedition encountered difficulties and finally disbanded (Kegley, R. 1594-5). It is manifest that this expedition, which attempted to use water transportation on a tributary of the Big Sandy River, regarded the possibility of navigating New River as too impracticable even to attempt. Obviously, the expedition would not have travelled through a mountain wilderness with all the labor and difficulty which that involved had there been any possibility of going down New River.

The Point Pleasant Expedition of the Virginians against the Indians on the Ohio River occurred in 1774. The Western Division of that expeditionary force under the command of the same Lewis (now Colonel) assembled at William Thompson's on Back Creek, which is now known as the Cloyd Plantation in Pulaski County. From this point they proceeded down the New River by land on a course generally parallel with New River, which they crossed, and then proceeded toward the Greenbrier River near what is now Lewisburg, West Virginia. The Expedition thereafter forded the Gauley River and made no use of water transportation until it had reached the mouth of Kelly's Creek on the Kanawha River near the present site of Charleston (Kegley, R. 1596-7).

In 1790, Charles Johnston and John May of Botetourt County, Virginia, made a trip to Kentucky by use of the Kanawha and Ohio Rivers. Johnston's own account of the trip discloses that they travelled overland until they reached Kelly's Creek on the Kanawha River where their travel by water began (Kegley; Incidents Attending the Capture, Detention and Ransom of Charles Johnston of Virginia, R. 1597-9).

Likewise, in 1798, when Moses Austin left Austinville, Virginia, for Missouri and Texas, he travelled overland to Kelly's Creek on the Kanawha, and there began the water stage of his journey. Austin's diary states that he left Austinville on June 8, 1798, with nine loaded wagons and a coach and four horses. He took the road to Morse's Boatyard located on the Kanawha at the mouth of Kelly's Creek. From that point, he travelled by water down the Kanawha and Ohio Rivers to Kaskaskia.

The foregoing are the only early trips down the New River Valley which history authenticates. With the exception of the unsuccessful attempt of Sally, none of them attempted to use water transportation above Kelly's Creek on the Kanawha River. Travel overland was then extremely difficult; thus it is plain that in its natural condition,

New River was not susceptible of use as a means of trade, travel or transportation, and, indeed, that even the Kanawha[1] could not be practically used above Kelly's Creek.

Petitioner, while carefully refraining from making the assertion itself, makes full use of a relatively unimportant, though erroneous, statement appearing in the opinion of the District Court, which petitioner distorts to serve its own purposes by adding a further error of its own. Petitioner states:

> "The first account of navigation on New River, according to the District Court, is that of an exploration trip in 1742; thereafter, a number of expeditions navigated the river over the reach now in issue (R. 111-112). It is true that the trips were difficult and that portages were necessary (R. 112), but the important fact is that they were made" (Pet. Br. 41).

Sally's trip in the canoe made of five buffalo hides and the 85-mile "portage" has been discussed at page 40 hereof. The other trips, exploratory in nature, on which petitioner has heretofore relied, occurred at a somewhat later date and we briefly comment upon them.

In 1812, a Virginia Commission, headed by John Marshall, made an exploratory trip to report upon the possibility of connecting the James River and the Ohio River, either by turnpike or canal. This Commission travelled from the James River across the mountains, down the Greenbrier River and thence down the New River to the Kanawha region (Ex. 189, R. 2716-2723).

In 1817, Laomi Baldwin, who was an engineer employed by the State of Virginia to survey and recommend a practical means of connecting the James River with the Ohio River made a trip from the James River down the Kanawha River, as far as what is now Charleston. His official report

---

[1] Even as late as 1876, one of the Army Engineers, William R. Hutton, stated: "Although the Kanawha is not navigable at low stages, there is no *flood* in which boats do not run" (Pl. (Pet.) *Ex. 245*, p. 76).

to the Board of Public Works of the State of Virginia discloses that he did not use New River on this exploratory trip and did not recommend the use of any part of New River, either in its natural condition or if artificially improved, as a part of a route connecting the James and the Kanawha Rivers. His report affirmatively discloses that he used no water transportation until after he had reached the Kanawha River where he planned to have a boat from Charleston meet him *(Ex. 556)*.

In 1819, the State of Virginia sent Moore and Briggs, likewise engineers, upon another expedition for the same purpose. They travelled from the head waters of the James River across the mountains, down various creeks, down Greenbrier River, up New River as far as Sinking Creek and also down New River to its mouth (Ex. 32, R. 2298-2301). It will be observed that the larger part of their trip on New River involved the admittedly unnavigable section below Hinton. Their "boat drew about nine inches of water" (R. 2307).

Neither the expedition of the Marshall Commission or that of Moore and Briggs was in the usual course of trade, travel or commerce. Each expedition was exploratory, and an experimental attempt to ascertain a feasible route of transportation by land or water from the James River to the Ohio River. Neither expedition reports observing any use of New River, or indeed the observation of a single boat of any character other than its own. Although the accounts of the trips of the Marshall Commission and of Moore and Briggs are colored by the natural optimism of the promoter and enthusiast, they nevertheless disclose numerous obstacles to any practical use of New River and make clear that no use of the River was practicable in its natural condition other than by artificial improvement. Indeed, the trip of Moore and Briggs was such a hazardous undertaking that they felt compelled to commend their men for their "courage, skill and dexterity exhibited in conducting our boat through the long and tremendous rapids of New

River" and expressed the view that it was "a voyage fraught with as much difficulty and danger as ever was completed with perfect safety" (Ex. 32, R. 2324).

In 1828, Capt. William G. McNeil, U. S. Topographical Engineer, made a report upon the prospective Roanoke and Kanawha Canal. It is significant that this report not only contains no reference to any use of New River for transportation purposes, but in suggesting to the Chief of Engineers the course to be followed by that canal, Capt. McNeil even fails to recommend as a possibility the use of the bed of New River as a part of the projected water highway. Instead, *he suggests that the canal be run along the bank* of New River, stating: "From the mouth of Little River, it (the canal) is prolonged on the right *bank* of New River to its intersection with the James and Kanawha Canal; and to the mouth of the Greenbrier, for most of the distance, the canal occupies very favorable ground through extensive flats which border on the river" (*Ex. 245*, p. 103).

The foregoing, we think, conclusively establishes that New River, in its natural condition, was not susceptible of practical use for trade, travel or transportation. Moreover, history affirmatively establishes that the routes of travel used by early settlers, traders and travelers were land routes over and along New River.

For example, one of these routes, perhaps the earliest, was known as the "Traders Path" (R. 1582). Then there was a route along the South Branch of the Roanoke River, and one along the North Branch. The one following the South Branch crossed New River near Dunkard's Bottom, thence continued westward through Dublin Hollow and over the divide which separates the water of the New and Holston Rivers (R. 1583).

Still another route came up the Catawba Valley in Botetourt County (R. 1583). This route was an extension of the Old Indian Trail through the Shenandoah Valley. It divided at Amsterdam, with one branch extending west near Catawaba Ridge. It followed the Catawaba Valley

for some distance, thence after crossing the Ridge, down the North Fork of the Roanoke River and over the dividing Ridge to Drapers Meadows, thence on to New River (R. 1583). The other branch of this valley trail extended from Amsterdam southward into Carolina. There was an overland route which ran down New River from Walker's Creek to the mouth of East River (R. 1583-4).

Then there was the Midland Trail, the western terminus of which was Kelly's Creek near the present site of Charleston, West Virginia (R. 1589), although there was an extension thereof which continued down to the mouth of the Big Sandy River and also one to Point Pleasant, West Virginia. There was also the Newbern-Red Sulphur Turnpike (R. 1590) later known as the Giles, Fayette and Canawa Turnpike (R. 1590), which turnpike ran from Newbern to Red Sulphur Springs, thence down Indian Creek crossing New River at Pack's Ferry, thence along the west side of New and Kanawha Rivers to the Ohio by way of Fayette Court House to Charleston, at which point it connected with the Midland Trail.

There was also the old Cumberland Road from Cumberland Gap, which followed East River to its mouth and then continued in the general direction up New River on to Blacksburg (R. 1590). Then, of course, there was the famous "Lead-Mines Road", one branch of which led to lower Virginia, following in part the old "Traders Path" and the other of which led to Ingle's Ferry, passing through Christianburg and Salem (R. 1600--1).

These overland routes and trails were the customary highways of trade and travel—the head of water transportation at that period for the New River Valley settlers being down on the Kanawha River at Kelly's Creek or Kelly's Station, near the present site of Charleston, West Virginia (R. 1599-1601). None of this testimony was controverted by the petitioner.

However, in seeking to avoid the inescapable fact that history establishes that New River was not used by early

settlers, traders or explorers, the petitioner has heretofore asserted that there was no occasion for its use because the tide of migration crossed New River and proceeded overland to the head waters of the Tennessee and other western rivers. The futility of such an attempt to escape the results of the undisputed facts on this point is apparent in many ways.

The record clearly shows that historically there was nothing that could be called use of New River. Was there any occasion for its use?

It is plain that had New River been susceptible of practical use, it would have been the natural road of migration to the rich western country. The fact that it was not so used would, alone, be of controlling significance. But laying aside that circumstance, the Court will take judicial notice that Kentucky was admitted into the Union in 1792, Ohio in 1803, Indiana in 1816, Illinois in 1818 and Missouri in 1821. The importance of communication to the westward, down the Catawba and Ohio Valleys, is therefore manifest. For years, Cincinnati, known as the Queen City of the west, was the largest city west of the Allegheny Mountains. Likewise, on the Ohio, Louisville, then as now, was the metropolis of Kentucky. From the New River region, the natural route for trade, travel and commerce with these important western settlements was down New River and the Kanawha to the Ohio and to the whole western country.

Indeed, the record shows that in 1790 Charles Johnston and John May travelled from Botetourt County to Kentucky by way of the Catawba Valley and the Ohio River (R. 1598-9) and that in 1798 Moses Austin travelled from Austinville, Virginia, to Texas by this same route (R. 1599-1600).

The uncontradicted record of each of these trips shows that each party travelled overland to Kelly's Boatyard on the Kanawha River near the site of the present City of Charleston, West Virginia, and there took boats for their

travel down the Kanawha and Ohio Rivers to Kentucky and Texas, respectively.

Petitioner has made no serious attempt[1] to explain why Johnston and Austin travelled overland through a rugged country and a practically virgin wilderness at a time when (as one of the petitioner's exhibits shows) "the only means of transportation were the rivers, as no highways or railroads existed in that part of the country" (Ex. 145, R. 2704). If it had been practicable to use the much more comfortable and expeditious means of transportation which would have been afforded by a river susceptible of practical use, it is plain that Johnston and Austin would have taken advantage of the method of travel. Not only are these trips themselves eloquent testimony of the importance of such a route and of the need for water transportation had it been available, but if there was no occasion for river travel, why did Kelly's Boatyard on the Kanawha River exist?

However, the end is not yet. In 1812, we find the State of Virginia sending the Marshall Commission to locate a route to connect the James River with the Kanawha and the Ohio Rivers. Can it be supposed that the State of Virginia was expending a large sum of money to establish a route for which there was no use?

If the fact did not otherwise appear as it does, this circumstance alone would make clear that the absence of

---

[1] Surely petitioner does not seriously urge that a single Falls (Kanawha Falls), standing alone, constituted a barrier to early river use (Pet. Br. 41), for portaging would make light of a single Falls. The significant thing in the case of New River is not that it contains a single Falls 18 feet high around which portaging would have been tolerable had there been expanses of good water on either side. Rather the significant thing in the case of New River is the series of rocks, ledges and shoals which would have made necessary a successive series of portages making river use intolerable.

The inconsistency of petitioner is apparent in view of the fact that it would have this Court believe that, not merely a single Falls, but (upon the erroneous premise that the improved Hinton and Radford stretches are navigable) a 60-mile series of such obstacles is not sufficient to constitute a barrier to navigability in fact as well as in law.

any use of New River could be explained not by the lack of any occasion for its use as a route to the rich western country, but upon the ground only that it lacked capacity for practical use.

Thus, in view of the pressing need felt by the people of the Eastern Seaboard, and particularly of the eastern portion of Virginia, as well as by the inhabitants of the upper New River region for a highway of commerce to the northward and westward, it is plain that there was ample occasion and reason for the use of New River which it was never feasible to make.

(b) Although the lead and iron industries were established on upper New River in very early days, history not only fails to disclose any use of New River for the transportation of either product but affirmatively establishes that neither product was ever transported, even locally, on New River, except a limited experimental and temporary local movement in 1881-1882.

The lead mines on upper New River, near Austinville, Virginia, were discovered in and have been worked continuously since 1756. During colonial times, and for a considerable time thereafter, these lead mines were the principal, if not the only source of lead. Much of this lead was transported northeasterly to Baltimore and to other eastern markets. Some of it was sent to Pittsburgh and down the River to supply the frontier forts and settlers of early days. There is no historical record that New River was used for the transportation of lead from these mines, either northeastwardly toward Baltimore and to the eastern markets, or northwestwardly toward the Ohio River and the western outposts.

New River flows in a northeasterly direction from the lead mines to and beyond the present site of Radford; and transportation by water for that distance would have been a great advantage and saving in transporting lead to Baltimore and other eastern markets. As early as 1780, Thomas Jefferson noted the great advantage which would accrue if it were possible to make New River navigable from the

lead mines northeastward, so as to shorten the land-carriage of refined lead to the eastern markets. History not only fails to record any use of New River for the transportation of lead, either to the eastern limits or down the Kanawha to the western outposts, but affirmatively shows that lead was transported by land routes (Kegley, R. 1587 (Jefferson's "Notes on Virginia"), 1601-2; R. 1733-4).

Manifestly, the great advantage of water transportation for heavy commodities would have caused the lead industry to have taken advantage of even a difficult and precarious navigation had that been possible, but the record shows that no such use was attempted—not even at the height of the short-lived enthusiasm engendered locally by the Federal work.

Charcoal iron furnaces were established along and upon upper New River as early as 1788; and they continued to operate for more than a century. Dr. Holden, who, we think, is the greatest living authority on the history of the lead and iron industries of southwestern Virginia, testified that there is no reliable historical evidence that there was any use or attempted use of New River for the transportation of pig iron from these furnaces, except a very limited and temporary local movement in 1881 and 1882.

The size and importance of the charcoal industry on upper New River is manifest from Doctor Holden's testimony (Holden, R. 1723-33).

The movement of charcoal pig iron in 1881 and 1882, which was only downstream and in small open boats propelled by poles, included only a portion of the output of but two of the numerous furnaces along New River above Radford, and extended over only a short reach of the river above the rail-head at New River Bridge. This limited temporary local movement was obviously experimental, stimulated by the attempts of the Federal Government to create a shallow artificial channel for a short distance upstream from the railhead of New River Bridge. It was abandoned after a year or two.

Even if this limited local and temporary movement of pig iron had not been abandoned, such a course would not establish that New River was naturally navigable, but only that it was possible to create limited and precarious artificial navigability in a stretch of the river for a few miles above New River Bridge.

The iron, lead and zinc industries are included in what are known as the "heavy" industries. Water transportation, where practical, is of greater benefit to heavy industries than to any other type of industry (Holden, R. 1736). This charcoal iron, for instance, was marketed not only in the eastern markets but in Cincinnati, St. Louis and Louisville (Holden, R. 1733). It is plain that if New River had been susceptible of practical use for water transportation, it would have been used to tremendous advantage by those industries of upper New River. On the contrary, it clearly appears that the land routes were the means of transportation for the marketing of products of the lead and zinc mines and smelter work charcoal iron furnaces, both before and after the coming of the railroads (Kegley, R. 1587, 1601-2; Holden, R. 1732-33).

None of this testimony with reference to the early means of transportation to and from the lead and zinc mines and the charcoal-iron furnaces on upper New River was controverted by any testimony offered by the Government. Indeed, as shown by many of the exhibits which the appellant itself introduced, even when the War Department sent Army engineers to the river for the purpose of examining it and inaugurating a federal attempt at improvement, they did not report that such industries were using the river. Instead are to be found such reports as that of S. T. Abert which states that

> "Nearly all the agricultural products of Pulaski, Floyd, Carroll and Grayson Counties, Virginia * * * have to be *hauled* from *ten* to *sixty* miles, *over mountain-roads*, and at a cost, in many cases, of from 40 to 50 cents per 100 pounds, * * * These rates render

exportation from the back counties *unprofitable,* and they are, except for livestock, shut out from market. The *opening* of the river would stimulate the cultivation of resources *now without value.*

• • • • • • •

"The agricultural resources are, however, exceeded by the *mineral.* These extend along the course of the river and beyond the limited section assigned to me for examination. But in *all this region* the *cost of hauling,* when added to railroad freights, *destroys the profits.*" (Abert to General Humphreys, Feb. 7, 1875, Ex. 559, R. 2816-7).

Abert also found that there were several furnaces operating along the river:

"• • • The following furnaces are in active operation, and are all situated only a few miles from the river, mostly under three miles; Graham & Robinson's, two furnaces; Radford Iron-Works, one ten-ton furnace; Howard & Saunders, one; Painter & Co., one; Huddle, one; Crocket & Sanders, one; Sayers & Oglesby, one; Speedwell, one; some others are in course of erection. Beside the blast furnaces, several bloomeries and forges exist on or near the river for manufacturing blooms and bars, direct from the ores, or otherwise converting pig-metal."

and that these furnaces were

"capable of producing about 10,000 tons per annum of the best cold-blast, car-wheel, charcoal iron,"

despite the fact that it

"costs, on an average, $4. per ton for haulage to railroad, • • • ". (Abert to General Humphreys, Feb. 7, 1875, Ex. 559, R. 2817.)

Then there is the Report of C. R. Boyd, Assistant Engineer who collected data "bearing upon the value of the improvement of New River to the adjacent country" and who likewise emphasized the lack of suitable transportation.

"Their (Counties of Grayson and Carroll) large deposits of copper and iron have long since induced enterprising men, of their own and neighboring counties, to devote capital and time to the raising of ores to find themselves *prohibited* from realizing a *safe return* by the *imperfect* means of *transportation.*" (Boyd to Col. Craighill, Dec. 17, 1872, Ex. 31, R. 2290.)

Although, despite the imperfect transportation, several furnaces and forges were operating:

"From the head of Cripple Creek, in Wythe County, extending north by east along the Creek, crossing New River, and extending through the southern portion of Pulaski and Montgomery Counties, is a great lead of iron ore, as represented on the map, varying in breadth, as shown by its furnaces and forges, from half a mile to two miles, sending off now and then arms but little less extensive than the main lead, giving the capital and labor invested along it remunerative returns, although the *imperfect means* of *transportation* for metal and supplies would appear to be prohibitory" (*id.;* R. 2290-1).

* * * * * * *

"The furnaces and forges above enumerated (Radford Iron-Works on Mack's Creek, Messrs. Graham, McGavock, Howard, and Saunders, Painter, Pierce, Chatwell, Huddle, Gallup, Crockett & Sanders, and Sayers & Oglesby) are now shipping 12,000 tons of metal annually, with a supply of charcoal timber so greatly diminished as to cause many of the proprietors to look abroad rather anxiously for supplies of stone-coal or coke" (*id.;* R. 2291).

However, Boyd saw the trade and industry as taking on greater importance if a better means of transportation were provided:

"The zinc ore to the southwest of and near the mouth of Reed Island Creek, appears near the surface in masses, giving upon assay a percentage which has induced purchases by experienced miners, and it

would be extensively worked were a *more certain means* of *transportation* provided" (*id.;* R. 2292).

* * * * * * *

"To sum up, a *sufficient transportation* will throw open to the world great metalliferous deposits, with the extent of which I was scarcely even in part acquainted, until that cursory examination of which this is the report" (*id.;* R. 2294).

Further, there is the report of N. H. Hutton, Assistant Engineer, who in recommending that the river be improved, stated *inter alia,* as follows:

"Carroll and Wythe Counties abound in rich deposits of copper, iron, lead, zinc, and manganese, which are yet hardly developed, *owing to the want of economic means of transport,* though there are now in operation, within a length of 20 miles *along the river,* 9 iron furnaces, and the Wythe Union Lead Mines, which have been worked for *more than a century,* and still yield abundantly of lead and zinc ores of great purity." (Hutton to Craighill, Dec. 17, 1872, Ex. 31, R. 2287.)

(c) There is no other evidence of any substantial use of New River, even local in character, before the Federal work.

Petitioner states: (1) That the report of N. H. Hutton, Assistant Engineer, who surveyed New River in 1872 makes plain that "the river was then navigated" (Pet. Br., 42);

(2) that "the improvement was to facilitate the already existing navigation" (Pet. Br., 43-44);

(3) that "the engineers reports from 1872 until 1899 speak of an existing navigation which reached throughout the Allisonia-Hinton stretch" (Pet. Br., 20);

(4) that the existence of "a Radford-Hinton Commerce" is indisputable (Pet. Br., 43); and also

(5) that the navigable channel "ran 'throughout this distance' from above Allisonia to Hinton (R. 2370; see, also, R. 2394, 2406-07)" (Pet. Br., 43).

Thus petitioner implies that the Army Engineers' reports showed that the river in its natural condition was being navigated throughout the entire section from Hinton, West Virginia, to Radford, West Virginia, and even from Hinton to Allisonia, Virginia. This simply is not the fact.

An analysis of the Army Engineers' reports shows that the only references in any of these reports to the use of boats on New River prior to the Federal work are the following appearing in a letter (printed in the Annual Report of the Chief of Engineers for 1873) from the above-mentioned N. H. Hutton, Assistant Engineer, to Colonel W. P. Craighill, in which Hutton states:

> "The present system of transportation on this portion[1] of the river is by keel-boats which carry from two to three tons, and are rowed or floated down the river and poled up. An expenditure of $100,000. would greatly ameliorate the condition of the river for this trade, and enable the trips to be made with *so much more certainty* as to induce a considerable increase of trade" (Ex. 31, R. 2288);

and such phrases as "keel-boats now in use" which appear in a few instances; for example, this phrase is to be found in the Annual Reports of the Chief of Engineers for 1877, 1878 and 1879 (Exs. 33, R. 2324; 34, R. 2362 and 35, R. 2333).

While Hutton's characterization of the localized, sporadic, and uncertain use of New River as a "system of transportation" possibly indicates that Hutton was one who did not blink at the use of superlatives, nevertheless it is

---

[1] Although not a single Army Engineer's report states that "'keel-boats' or bateaux" (Ex. 34, R. 2328) were navigating "throughout this distance from above Allisonia to Hinton" *even after* the Federal work was completed, much less *before* the Federal work, and the inescapable conclusion is that such was not the case (see page 56 hereof), nevertheless petitioner has left the erroneous implication, whether intended or not, that the Army Engineers were referring to trips made by boats between such terminals as Hinton, West Virginia and Allisonia, or Hinton, West Virginia and the lead mines in Virginia.

most probable that this characterization actually referred to such intermittent use as keel-boats made of the limited pools[1] and possibly to an occasional use made of other local reaches of the river in time of high water, for in the Army Engineers' reports it is stated of even the relatively flat Kanawha River, which, of course, is downstream from and larger than the New, that "although the Kanawha is not navigable at low stages, there is no *flood* in which boats do not run * * * " (*Ex. 245*, p. 76; Report of William R. Hutton to Col. William P. Craighill, 1876), and that

> "The navigation above Charleston was more obstructed than below. Above, it was almost suspended in summer. The coal and salt were generally sent out on *rises*, which enabled the boats to pass safely over the obstructions, which otherwise would stop their movements entirely. The use of the river for the movement of these valuable products was therefore *unsatisfactory* and *intermittent.*" (Report of C. of E., 1882, *Ex. 38*, p. 142.)

However, any inference or deduction from the phrases "present system of transportation on this portion of the river" and "keel-boats now in use" to the effect that there was any real, substantial, or continuous transportation system on the river is quickly dispelled when it is observed that even after the attempt at improvement had been under way for three years on the lower division of the river and

[1] Hutton states that the river "presents the usual features of mountain streams; reaches of comparatively still and deep water *separated* by rapids and shoals" (Ex. 31, R. 2282). Obviously the fact that the pools were *separated* by ledges and shoals and that the depth over ledges and shoals was "rarely over 1 foot in depth" imposed physical limitations, which necessarily served to confine any use that could be made of the river to the pools, and the pools, of course, were too short for anything except the most local sort of use. In the upper portion "whole miles being composed of ledges of slate or limestone, *200* or *300 feet* apart, with *small* pools between," and even the lower portion "though the rapids are more concentrated, yet even there the pools will hardly average more than *one mile* in length" (Ex. 31, R. 2282).

four years on the middle division of the river, there were only eight keel-boats and two keel-boats on the two divisions respectively, or ten keel-boats on the entire river (Report of Chief of Engineers, 1881, Ex. 37, R. 2371). Any improvement of the river would, of course, have stimulated any use of keel-boats; hence in 1872, at the time Hutton was writing, there certainly was not a greater number of keel-boats in use than in 1881, and presumably fewer.

Moreover in 1883, which was six years after the improvement work had been inaugurated, the Chief of Engineers reported that:

> "The navigation of the river *not being continuous* as yet, it is *practically a feeder to the railroads* which cross it and run along portions of it." (Ex. 39, R. 2396.)

Also

> "It has hardly been practicable to accomplish at any one of the very many points needing improvement all that has been desirable, but the worst places have been worked upon to the greatest extent and efforts thus been made to increase the available navigability of the river over as long stretches as possible, and to increase the facilities for *access* of the greatest number *to the railroads* touching the river, and thus connecting with the eastern and western markets districts otherwise *much isolated* and *hitherto dependent* on *teaming* to *railroad stations* over *long* and *bad roads*" (Ex. 39, R. 2396).

Hence it is obvious that any inference or deduction to the effect that there was any substantial or continuous system of transportation on New River in its natural condition is wholly unwarranted.

However, Hutton's letter itself contains a refutation of any such inference or deduction, inasmuch as Hutton states that the very object to be accomplished by the proposed improvement of the river was

> "* * * to *connect* the iron, lead and zinc deposits of Wythe County and the copper of Carroll (Va.) with

> the coal of the Kanawha Fields (W. Va.)" (Report of Chief of Engineers 1873, Ex. 31, R. 2287),

clearly showing that *such connection* was *then* lacking.

Furthermore, Hutton referred to the various products in the region which could be marketed "*if* an *outlet* were offered to a market", (Report of Chief of Engineers 1873; Ex. 31, R. 2288) and he again shows the lack of any substantial use of the river in its natural condition by alluding to the benefit *expected* to be derived from the proposed improvement stating:

> "The improvement, *if effected*, would, in about 40 miles below the Lead Mines, intersect the Virginia and Tennessee Railroad and the Chesapeake and Ohio at the mouth of the Greenbrier, thus *opening* to both eastern and western markets a large area of productive country, *now* practically *shut up*" (Ex. 31, R. 2288).

Numerous other references throughout the Engineers' reports portray a lack of use of the river as a highway of commerce in its natural condition. Instead, the reports stress (a) the need of improving the river in order to provide an outlet for the country, or (b) the need of improving the river in order that mineral and agricultural products might be shipped by water, or (c) what boats could do as a result of the improvement which they could not do prior thereto.

(i) Respecting the necessity of *providing* outlets:

> "That the proposed improvement will be of real and decided *local benefit*, I consider now proven. It, and it alone, can and will afford an adequate *outlet* for a region good agriculturally; and with ascertained workable mines of the ores of lead, zinc, coal, and iron, and a considerable lumbering district all favoring the building up of local manufacturing interests, an *outlet* alone is *needed* to put in motion at once a considerable and increasing trade" (Cuyler to Craighill, March 15, 1879, Ex. 35, R. 2342).

"June 30, 1880, there was a channel 50 feet wide and 2 feet deep from Hinton Landing to Hubbard's Ripple, a distance by river of 12½ miles, *giving an outlet* to the products of Mercer County, West Virginia.

"At the close of the season's work for 1880, there was a channel of the same width and depth, from Hinton Landing to McDaniell's or Harvey's Falls, a distance of 17¾ miles, *giving an outlet* to the farmers and graziers of Crump's Bottom and the Indian Creek country. And in addition to the above there are 12 miles of improvement from New River Bridge to Peak's Creek, with a channel 30 feet wide and 2 feet deep, *giving an outlet* for timber and farm products, *but not available* for iron or ores *until* Radford Furnace *can be reached*" (Smith to Craighill, April 8, 1881, Ex. 37, R. 2376-7).

"The appropriation for the fiscal year ending June 30, 1882, will carry the improvement on the Greenbrier Division through Wiley's Falls, 26 miles above Hinton, passing the mouth of Lick Creek, 20 miles above Hinton, *thus opening up the trade* from Tazewell and other rich counties adjoining" (Smith to Craighill, April 8, 1881, Ex. 37, R. 2377).

"The appropriation for the fiscal year ending June 30, 1882, will carry the improvement on the New River Bridge division to Carter's Ferry, 33 miles above the bridge, and *give an outlet* to the iron from Radford Furnace, 18 miles above the bridge, to the ores from an iron mine 8 miles beyond, to Graham's new furnace and iron works, the former 31 miles and the latter 33 miles above the bridge, as well as to two zinc mines in the same section" (Smith to Craighill, April 8, 1881, Ex. 37, R. 2377).

"The channel *gives outlet* to Reed Island Furnace at the mouth of Big Reed Island Creek, 26¾ miles above the initial point. In the 8 miles referred to seventy-three ledges were encountered, twenty-seven of which were improved for the 10-foot channel, and nearly all will have to be worked at when the 20-foot channel is made, which should be as soon as Barren Spring Furnace is reached; to do this it is thought it will be best to go back to the beginning of the 10-foot channel, at the foot of Cecil's Ledges, 14½ miles

above the bridge. The increased width is rendered necessary in some places where there is loose rock and gravel, as 10 feet is not wide enough for the current to keep the channel clear; as, for instance, at Jones' Ford and Crumm's Shoals; in fact, the narrow channel was only adopted to give *temporary* relief to the furnaces". (Smith to Craighill, May 21, 1883, Ex. 39, R. 2400).

"From the lead mines up, it is proposed to make a channel as below, 2 feet deep and 20 feet wide, a width sufficient for bringing charcoal for the furnaces down in bateaux, and for rafts of timber, of which there is an abundance in this region; there are also large deposits of copper in Carroll County, which it is thought will be *eventually* mined and *shipped* over this route" (Smith to Craighill, April 8, 1881, Ex. 37, R. 2375).

"The above (a table showing tonnage sent from and received at various railroad stations for the year ending December 31, 1880) is all from the two upper sections of New River now being improved, and it may be safely asserted that not less than one-third of this amount *will be shipped* by water as soon as the channel is made.

"Of the products of the mines, which amount to 7,044 tons, exclusive of coal 7/8ths *will be carried* in boats down to New River Bridge Station.

"The proportion of tonnage received, that *will be sent* over this route, could not be ascertained" (Ex. 37, R. 2380).

"Rreeden's ledges, nearly 25 miles above the initial point, were improved for the shipment of iron ore from the mines to Radford Furnace" (Smith to Craighill, April 28, 1882, Ex. 38, R. 2387).

"To finish Pine Run Shoals will require cutting through four ledges, about 15 feet wide, and *give outlet* to Barren Spring Furnace, 30.9 miles above the bridge" (Smith to Craighill, May 21, 1883, Ex. 39, R. 2400).

"8 keel-boats on this division, with a small side-wheel steamboat, 75 feet long, 8 feet wide, and drawing 3 feet. 18 charcoal furnaces, 4 forges, 4 zinc mines, 1 lead mine, and many deposits of copper *await shipment by the river*, and vast forests of the

most valuable timber, on the upper division, are *kept from market by the non-completion* of this work" (Smith to Craighill, May 21, 1883, Ex. 39, R. 2400-01).

"The improvement, when it reaches a point 35 miles above Hinton, will give *outlet* to Peterstown, Monroe County, West Virginia, a thriving place, about 2½ miles from the River, at which there are three mills with a capacity of 58 barrels of flour and one hundred and twenty bushels of meal per day, three tanneries using 1500 hides per annum, three stores, one saw-mill, and one cabinet shop" (Smith to Craighill, May 21, 1883, Ex. 39, R. 2399).

The foregoing excerpts from the Engineers' Reports clearly imply that the river in its natural condition did not serve as an *outlet* for any substantial commerce but that instead real improvement would be necessary before a river *outlet* would be available.

(ii) Respecting the necessity of improvement in order that mineral and agricultural products might be shipped by water:

"The freshet of September, 1878, undoubtedly went to impair much the improvement made, involving an expenditure of from $2,000. to $3,600. to do over work once completed; but with this, even, there has been a decided betterment of navigation effected. The fact, however, originally set forth must not be lost sight of—that if any marked benefit is to accrue from the improvement it must be extended up 5 miles—to make the 19 miles first projected—or to Mac's Creek, at a cost of $7,600. more. This point is in this region of the downstream boundary of an extensive and rich mineral-producing district, which is the *main interest* to be served by the improvement, and which *alone* can and *would inaugurate* full use of it *when once made*. To *utilize*, then, the work already done commensurately with its cost, necessitates as immediate a *completion* to Mac's Creek as possible" (Cuyler to Craighill, March 15, 1879, Ex. 35, R. 2340).

"The owner of Radford Iron Furnace, 18 miles above New River Bridge, as well as those of a furnace on Little Reed Island Creek, 26½ miles from the bridge, are *anxious to send* iron and ores down *by bateaux;* and, in addition, the following *may be expected* to ship: Forge at mouth of Little Reed Island Creek; Barren Spring Furnace; furnace near this belonging to Graham and Robinson; Bertha Zinc Works; Falling Cliff Zinc Works, to be started soon, and yet another, by a New York company near the Bertha Mine." (Smith to Craighill, April _, 1881, Ex. 37, R. 2374.)

"*Shipments* of iron by river *only commenced* in December, 1881, and are not shown. *When* the river is *fully improved* it is *thought* that *boats will carry* one-third of all the products and seven-eighths of those of the mines, exclusive of coal. The tonnage from these stations is one-third more than in 1880." (Smith to Craighill, April 28, 1882, Ex. 38, R. 2392.)

Referring to New River Bridge Division "Eight keel-boats on this division, with a small side-wheel steamboat, 75 feet long, 8 feet wide, and drawing 3 feet, eighteen charcoal furnaces, four forges, four zinc mines, one lead mine, and many deposits of copper *await shipment* by the river, and vast forests of the most valuable timber, on the upper division, are kept from market by the non-completion of this work." (Smith to Craighill, May 21, 1883, Ex. 39, R. 2400-01.)

"The work stops almost in the middle of Wilkinson's Shoals, which are 1¾ miles long, and *until they can be finished the improvement amounts to nothing;* in fact, *to be useful* for the shipment of timber and charcoal, it should be carried at least 4 miles farther, to Crooked Creek." (Smith to Craighill, April 28, 1882, Ex. 38, R. 2388.)

The foregoing excerpts from the Engineers' Reports clearly show that New River in its natural condition was not used for any substantial amount of shipping of mineral and agricultural products. Instead, they show *expectations* which would be realized *only after the improvement* of the river.

(iii) With respect to facilitating the passage of boats:

> "The improvement, as now made, enables the steamboat to go up 12½ miles at ordinary low water, and with a rise of 7 inches she can go, and has gone, up above Crockett's store, 15 miles from Hinton.
>
> "The work is of great benefit to bateaux, enabling them to get through with a great deal of ease and to carry much larger cargoes than formerly, and, in fact, they can run now where it was *utterly impossible before,* owing to low water. Of these lines there are three, one to Bluestone, 5 miles, one to Crockett's store, 14½ miles, and one to Lick Creek, 20 miles above Hinton." (Smith to Craighill, March 30, 1880, Ex. 36, R. 2366.)
>
> "Four lines of keel boats, eight in all, now run regularly on this part of the river, the improvement enabling them to carry two-thirds more freight than formerly; for instance, 1500 feet of lumber used to be a load; now it is 4500 feet." (Smith to Craighill, April 8, 1881, Ex. 37, R. 2373.)

Likewise the foregoing does not portray a river capable of continuous navigation in its natural condition but instead they portray the value of the improvement work by showing what a boat could do, on a local reach of the river, as a result thereof, which could not be done before.

The *local nature* of any use made of the river prior to improvement is further shown by the fact that Smith, in 1882, states:

> "The work is now in Virginia, but as only a small point of that state puts in here the work will essentially be for the benefit of West Virginia, as the Counties of Monroe and Mercer in the latter state will supply *all* of the freight, *until* the improvement reaches the Narrows, 40 miles above Hinton" (Ex. 38, R. 2385).

Of course, the federal work never reached the Narrows.

The fact that prior to the federal work river transportation was unimportant and that instead of products custom-

arily being carried to market by boat they were taken there by wagon, as well as the fact that there was no continuous navigation of the river, is shown by the Report of the Chief of Engineers, 1883:

> "It has hardly been practicable to accomplish at any one of the very many points needing improvement all that has been desirable, but the worst places have been worked upon to the greatest extent and efforts thus been made to increase the available navigability of the river over as long stretches as possible, and to increase the facilities for *access* of the greatest number to the *railroads* touching the river, and thus connecting with the eastern and western markets districts otherwise much isolated and *hitherto* dependent on *teaming* to railroad stations over *long* and *bad roads*" (Ex. 39, R. 2396).

In fact, even after the work on the lower and middle divisions was finished, the Chief of Engineers (1883) expressly states that there was no continuous navigation of the river.

> "The navigation of the River *not* being *continuous* as yet, it is practically a *feeder* to the railroads which cross it and run along portions of it" (Ex. 39, R. 2396).

from which follows the inescapable conclusion, that there could have been no continuous navigation of the river prior to the federal work.

3. *The nature and extent of the federal work on New River and its subsequent abandonment not only failed to support an inference of navigability but constituted strong evidence of lack of practical utility for navigation.*

Beginning in 1877, the Federal Government undertook to create an artificial channel relatively shallow and narrow in three widely separated local stretches of New River. Within the period from 1877 to 1889 a total expenditure of approximately $110,000 was made—a meager expenditure

over a period of 12 years! Work was limited to the stretches most easily improved and an effort was made artificially to provide local navigation.[1] The project proved impracticable and ineffective and was abandoned by the Federal Government. Reserving a more detailed description of the nature and scope of the Government work for later consideration, we first examine the evidence to determine what, if any, effect the Government work had on the use of New River.

---

[1] POINTS REACHED BY FEDERAL WORK IN VARIOUS YEARS.

KEY: (a) Refers to Lower, or Greenbrier, Division.
(b) Refers to Middle, or New River Bridge, Division.
(c) Refers to Upper, or Lead Mines, Division.

1877 (b) (Work completed from New River Bridge to Falls Branch, a distance of 9 miles (Ex. 34, R. 2330).

1878 (b) (Work completed to Peak Creek Shoals. Distance 13½ miles above New River Bridge (Ex. 35; R. 2339).

(a) (Partial improvement to Land Craft Shoals, 5⅞ miles Ex. 36; R. 2368) above Hinton (Ex. 35; R. 2345).

1879 (a) (River partially improved to downstream end of Crump's Bottom (Ex. 36; R. 2366) about 15 miles above Hinton).

1880 (a) (Improvement carried as far as Harvey's or McDaniel's Falls 17¾ miles above Hinton landing (Ex. 37; R. 2373).

(b) (The channels on the middle division which were damaged by the freshet of 1878 were cleaned out (Ex. 37; R. 2374).

1881 (a) (Work reached about 26½ miles above Hinton (Ex. 38; R. 2385).

(b) (Improvement reached 22 miles above New River Bridge—some work done on Breeden's Ledges 25 miles above New River Bridge (Ex. 38; R. 2386-7).

(c) (River worked for a distance of 5½ miles above the Lead Mines or to Wilkerson's Forge (Ex. 38, R. 2388).

1882 (a) (Continued work to Wiley's Shoals, about 26½ miles above Hinton (Ex. 39; R. 2398).

(b) (Continued work to a point in Pine Run Shoals—29¼ miles above New River Bridge (Ex. 39; R. 2400).

1885 (c) (Work carried to 6¼ miles above Lead Mines (Ex. 42; R. 2412).

1889 (c) (Work continued to the "Gulf" 7-9/10 miles above the Lead Mines (*Ex. 563*, p. 2250).

(a) The Use During and After the Federal Work Was Essentially Limited in Amount, Local, and of Relatively Short Duration.

(1) *Miscellaneous use of river by bateaux or "keel-boats".*

The Engineers' reports show that such use of the river as was made by bateaux was almost entirely of a local nature.

Capt. Cuyler, who had charge of the first work on the river in 1877, in reporting to Col. Craighill, refers to the fact that after the flood of September 13, 1878, the Government property used in the improvement work was collected and repaired and then "all boated[1] down to Hinton".

---

[1] If this were to be stated less euphoniously, it would be said that the Government work boats "all were washed down the river". The witness Knode, who had charge of collecting the Government work boats after the flood of 1878 and taking such of those as he could find and which were fit for use, on to Hinton, is illuminating on the subject of this *boating* down to Hinton. He states (R. 1566-7):

> "It was 11:30 when we went out of there, I remember, and those boats broke loose and I was two miles below at my home where my father lived, and those boats came along; we could not catch them then.
>
> "Later on I took a force of men and gathered up such Government property as would be of any account, from there to Hinton, after the river went down. I recall finding one boat at Dry Branch; it was, possibly was not a quarter of a mile—but some several hundred yards from the river. I did not find any other boats which were any good. There were four boats that we used for gravel boats. We found them, one at Dry Branch, one at Narrows; one was torn all to pieces—it had a small derrick on it. There was a tide in the river when we went down, there had to be, or we could not have gotten down."

The foregoing is the unexpurgated story of the "flotilla of boats" to which the petitioner referred "as having navigated the river for a distance of 84 miles down to Hinton, West Virginia" in its brief before the Court of Appeals (App. Supp. 196) and which petitioner, in its present brief (p. 178) refers to as the transportation of the "Government surplus property" from "Mack's Creek to Hinton," and it was this flood movement—not to mention destruction—of the Government work boats of which petitioner said in its brief before the Court of Appeals (App. Supp. 197): "These

(Footnote continued on next page)

(Ex. 35, R. 2337-8). Significantly, he does not record that any commerce, even local, was being carried on by means of the river.

In 1880, Smith referred to a use being made of the river stating in his discussion of the federal work:

> "The work is of great benefit to bateaux, enabling them to get through with a great deal of ease and to carry much larger cargoes than formerly, and, in fact, they can run now where it was utterly impossible before, owing to low water. Of these lines[1] there are three, one to Bluestone, 5 miles, one to Crockett's store, 14½ miles, and one to Lick Creek, 20 miles above Hinton." (Smith to Craighill, March 30, 1880, Ex. 36, R. 2366).

---

uses of the river *really are commercial uses*", and which, in its present brief, petitioner lists under the heading: "Commercial Navigation on New River between Hinton, West Virginia and Allisonia, Virginia" (Pet. Br. 178).

On one other occasion the Government work boats were taken from Radford to Hinton. This 84-mile trip was made in 29 days 'flat'. Smith, writing of it, states:

> "On the 17th of March, J. F. Palmer, to whom much praise is due * * * for the energy and ability displayed in this movement, commenced that work, and after much difficulty, on account of the weather, low water, and scarcity of labor, succeeded in getting it all at the proper point [Hinton] on the 14th of April * * * " (Ex. 39, R. 2401).

Petitioner refers to this (Pet. Br. pp. 51-52) in connection with its recital of the testimony of its witness Owen to the effect that the boats were taken from "Radford down the river to Hinton where they were sold".

The entire "flotilla of boats" on this occasion sold for $415.26 (R. 2397), hardly more than the price of a second-hand automobile. The money was turned into the Treasury and the federal work on the Greenbrier and New River Bridge Divisions of the River was ended.

[1] The phraseology used in the pertinent report is "three lines of keel-boats". However, in the terminology of the river, a "line of keel-boats" meant two keel-boats (see more complete phrase used by Smith elsewhere, viz., "four lines of keel-boats, eight (boats) in all" (Ex. 37; R. 2373).

In 1881, Smith wrote that:

> "Four lines of keel boats, eight [boats] in all, now run regularly on this part of the river, the improvement enabling them to carry two-thirds more freight than formerly; for instance, 1500 feet of lumber used to be a load; now it is 4500 feet." (Smith to Craighill, April 8, 1881, Ex. 37, R. 2373).

and that there were eight keel-boats on the lower division and that on the middle division there were two keel-boats which "are in use carrying ores"[1] (Ex. 37, R. 2371).

Major Alstaetter, in 1912, stated:

> "In 1883 there were about seventeen keel boats in this traffic, and there are *said to be*[2] ten or twelve such boats now on the river. * * * The commerce is *altogether local*" (Ex. 46; R. 2423-4).

Several witnesses from the vicinity of Hinton, West Virginia, were produced by the petitioner for the purpose of testifying with respect to the boating of lumber, tobacco, and miscellaneous products in the religions below and above Hinton. Most of this testimony had to do with the

---

[1] This carrying of ores was in essence little more than a ferrying operation. That is, the ore was brought by wagon from Clark's Ore Bank (on the west side of the river) to the river, there loaded on a boat and taken downstream and across the river about one and one-half miles to the foot of Breeden's Hill, now Hiawassa, and thence transported by wagon over the hill several miles to Radford Furnace (*Ex. 550;* R. 1725; deposition of R. H. Moore, R. 450).

[2] Petitioner (Pet. Br. 38) has given footnote emphasis to Maj. Alstaetter's statement (although not referring to him by name) that "there are *said to be* ten or twelve such boats now on the river". Of course, this was purely hearsay. Indeed, Alstaetter does not record that he, himself, observed a single boat anywhere on the entire 84-mile reach from Radford to Hinton which his examination covered. And, even with respect to these "said to be" boats, Alstaetter does not state that they were "said to be" as far upstream as *Glen Lyn*, as might be inferred from petitioner's use of the words "Glen Lyn-Hinton stretch". In fact, he does not state that they were "said to be" *in use* at all.

carrying of forest products downstream to Hinton for shipment by rail.

Any evidence of even a sporadic and unusual trip as far as or above the vicinity of Wiley's Falls, was enshrouded with vagueness and indications of irregularity and in general was of such character as to make it preponderantly clear that such sporadic trips formed no part of any appreciable commercial transportation (R. 114). It clearly appears that boating was practically confined to the movement of forest products from a short distance above Hinton to the railroad at Hinton.

This limitation is clearly recognized by the report of the Chief of Engineers for the year 1882 in which it is stated:

> "The work is now in Virginia, but as only a small point of that State puts in here, the work will essentially be for the benefit of *West Virginia*, as the Counties of Monroe and Mercer in the *latter State* will supply *all* of the freight, until the improvement reaches the Narrows, 40 miles above Hinton" (Ex. 38, R. 2385).

(2) *Transportation of Pig Iron.*

During the course of the trial, testimony was offered by various aged witnesses—petitioner, in its brief (Pet. Br. 178 *et seq.*) has purported to tabulate some of this testimony—concerning the alleged boating of charcoal or pig-iron from one furnace known variously as Boon, Boone, Boom, and Reed Island Furnace, and another known as Radford or Mack's (Mac's) Creek Furnace.[1] It would appear that there

---

[1] During the course of the federal work certain of the Army Engineers apparently came to realize that if the improvement in the short stretch of river above Radford could be of benefit to anyone it would be to the furnace industry and mineral interests. Cuyler refers to this, stating:

> "The fact, however, originally set forth must not be lost sight of—that if any marked benefit is to accrue from the improvement it must be extended up 5 miles—to make

(*Footnote continued on next page*)

is little to be gained from discussing such testimony in detail, inasmuch as it is clear that such boating was not only temporary and very limited but was only over the short stretch above New River Bridge where the Government had attempted a local improvement.

Furthermore, the testimony of many of these aged witnesses is so vague as to the time when such boating began, the period it covered and the amount of boating done as to be uninformative, and, in the cases of others of these witnesses, the testimony is so obviously in error, being predicated upon memories that have been dimmed by the passage of many years, that the sum total of their testimony is a series of contradictory and uncertain statements which preclude it from being a source of reliable information.

For example, the petitioner's witness, J. G. Graham, thinks that the boating of pig-iron covered a period of three or four years (R. 236). On the other hand, the respondent's witness, A. Moore, thinks that it continued off and on possibly for a year or year and a half (R. 1556). He states that

---

the 19 miles first projected—or to Mac's Creek, at a cost of $7,600. more. This point is in this region the downstream boundary of an extensive and rich mineral-producing district, which is the *main* interest to be served by the improvement, and which alone can and *would* inaugurate fully use of it *when once made*. To utilize, then, the work already done commensurately with its cost, necessitates as immediate a completion to Mac's Creek as possible." (Cuyler to Craighill, Mar. 15, 1879; Ex. 35, R. 2340).

And Smith listed certain furnace owners; etc., above Radford who were anxious to make use of the river, stating:

> "The owner of Radford Iron Furnace, 18 miles above New River Bridge, as well as those of a furnace on Little Reed Island Creek, 26½ miles from the bridge, are *anxious* to send iron and ores down by bateaux; and, in addition, the following *may be expected* to ship: Forge at mouth of Little Reed Island Creek; Barren Spring Furnace; furnace near this belonging to Graham and Robinsion; Bertha Zinc Works; Falling Cliff Zinc Works, to be started soon, and yet another, by a New York company, near the Bertha Mine." (Smith to Craighill, April 8, 1881; Ex. 37, R. 2374.)

it was not a continuous thing, due to the condition of the river; that they would make a trip and then perhaps not carry any more iron for two or three weeks (R. 1556). Petitioner's witness, D. R. Peterson, thought that the pig-iron boating only lasted for possibly one year (R. 448) and then only occasionally. Moreover, it was necessary to wait until there was something of a tide in the river—"They didn't haul regularly, couldn't get through" (R. 448). The Mack's Creek Furnace hauled its iron by wagon to Dublin "most of the time" (R. 448). "They (the operators of the furnace) finally quit the boat business and hauled it (iron) with wagons again all the time" (R. 448).

Again we find that the petitioner's witness A. S. Breeding, states that so far as he knows (R. 255-260) boating of pig-iron ceased before the flood of 1878, although he could not recall whether or not the Cripple Creek Railroad was constructed prior to the flood (R. 260).[1] On the other hand, the petitioner's witness, Eli Duncan, does not think that pig-iron boating ceased before the flood of 1878. Instead, and although he was but five years of age in 1888, he thinks that there was pig-iron boated as late as that time. He could not say definitely that this was the case, but he says that he saw keel-boats in 1888 and thinks that they were carrying pig-iron (R. 273).

Petitioner's witness, J. D. Haley, had an even more ancient account of pig-iron boating than the petitioner's witness, A. S. Breeding, his recollection being that pig-iron boating was begun in 1870 or 1872 (R. 279). Similarly, on the other hand, petitioner's witness, James Howard, has a still more modern version than petitioner's witness, Eli Duncan, for he claims to have seen pig-iron boated from Boom Furnace some thirty-five or forty years ago—1896-1901 (R. 336).

Actually, it is clear from the army engineers' reports that "shipments of iron by river only commenced in Decem-

---

[1] Actually it had not been constructed until October, 1886 (Ex. 548, R. 2812-A).

ber, 1381 * * *'' (Report of Chief of Engineers, 1882, Ex. 38, R. 2392). That report states that "four boats are being used to carry iron from Boone and the same number from Radford Furnace" (*id.* R. 2393). Likewise, (1) from the report of the Chief of Engineers covering the fiscal year from June 1882 to June 1883, which states:

> "Something over 900 tons of pig iron were shipped from Reed Island Furnace, 26¾ miles above New River Bridge, to the Norfolk and Western Railroad at the latter point, and 256 tons from Radford Furnace, 18 miles above the Bridge"[1] (Ex. 39, R. 2400).

and (2) from the fact that *in none of the reports for subsequent years does any army engineer speak of having observed further pig-iron boating* and Dr. Holden's testimony to this effect (R. 1733), it seems clear that it ceased some time during the years 1882 or 1883.

There is other testimony which shows that this boating had ceased by 1882-83 and which, incidentally, controverts the contention made by petitioner (Pet. Br. 37-38) that the completion of the Cripple Creek Railroad late *in 1886* was the cause of cessation of this boating.

First (and disregarding the statement of petitioner's own witness, A. S. Breeding, who thought the boating of pig-iron ceased before the flood of 1878, and whose statement belies petitioner's contention), there is the testimony of John Knode, whose deposition had been taken by the petitioner at Radford, Virginia, in February, 1936. His deposition was to such effect that petitioner did not choose to produce him as a witness at the trial; hence he was called by the respondent as a witness. He stated that he made a contract for the hauling of pig-iron in 1881 or 1882 (R. 1569) and that he boated pig-iron for about two months (R. 1569). When he started this boating he thought he could make

[1] This 1156 tons, i. e. 900 plus 256, is the tonnage to which petitioner refers (Pet. Br. 37). It, of course, was only a small fraction of the production of even these two furnaces (Holden, R. 1729).

something out of it, but discovered after "a thorough trial" that he could not (R. 1568). The boats stuck on the river bed frequently and boatmen had to throw the iron out into the river in order to lighten the load (R. 1568). Often boats "rubbed a rock too hard" (R. 1570) and would get holes punched in them (R. 1568; 1577). Hence Knode stopped boating and moved to Dunkard's Bottom (R. 1569). He lived there alongside the river, for the next twelve years or until 1895 (R. 1569), but never thereafter did he see any boating of pig-iron (R. 1569, R. 1572). For that matter he saw no boats other than his own carrying pig-iron during the time that he and his men were engaged in this hauling (R. 1572).

Furthermore, the respondent's witness, Isaac Huff, an employee of Boom Furnace, states that he moved to that Furnace in 1882 (R. 1561), at which time the iron was being hauled to Dublin and Martin's Tank (Pulaski) by wagon (R. 1561). This hauling by wagon continued until the trains started running to Allisonia in 1886 (R. 1561). Between 1882 and 1886 iron was hauled to Dublin and Pulaski by wagon, but no pig-iron was boated (R. 1562-4).

Similar in effect is the testimony of the petitioner's witness, Z. Farmer. His testimony shows that the boating of pig-iron ceased some three years before the completion late in 1886 of the Cripple Creek Railroad. He states that the boat which he bought had been sold at Casey's execution sale (R. 294), Casey being one of the boatmen who met with financial failure in the course of his boating operations (R. 294). Farmer states that he bought the boat about a year after the hauling of pig-iron ceased, paying $15. for it (R. 294). He kept the boat two years (R. 294) and then sold it to some men who were at work on the construction of the Cripple Creek Railroad Bridge (R. 294).

The testimony of respondent's witness, E. C. Gannaway, also shows that the boating of pig-iron had ceased long before 1886. He states it had stopped by June 1882. While some iron was shipped by boat from Boom Furnace in 1881

and early 1882, nevertheless he saw none subsequent to June 1882, when he returned from college to his home on New River at the end of the school year (R. 1634).

In short, the evidence is convincing that the boating of pig-iron on New River did not begin until December, 1881, and had ceased by 1882-83; that such use as occurred in that short period was of an irregular experimental character during highwater and confined to a short reach of the river above Radford; and that, because the railroad was not opened until late in 1886, this cessation of pig-iron boating was not due to the paralleling of the reach of river above Radford by the Cripple Creek Railroad.

(3) *Furnaces along New River continued to operate after the experiment in pig-iron boating ceased.*

Petitioner in its brief before the Trial Court (Pl. Br. in District Court, 219-227) indicated that it was considerably disturbed by the evidence of the respondent establishing that the experimental boating of pig-iron terminated in 1882-83 (prior to the opening of the Cripple Creek Division of the Norfolk & Western Railroad in 1886), and that the furnaces on New River continued to operate for several years after that time.

This quarrel was particularly directed at the testimony of Dr. R. H. Holden, the man who was best informed on the subject and was so known to R. J. Noel, who procured evidence for the petitioner (R. 1754-5).

Petitioner there characterizes as somewhat unusual the statement that these furnaces continued subsequently to 1884 and 1885 (R. 1729, 1749):

> "in view of the fact that no historical references are cited and since his table showing production of charcoal pig-iron in the State of Virginia—this being the type produced at the New River furnaces—indicate no production after the year 1884."

However, it cannot properly be said that the records "indicate no production after 1884." To be sure, 1884 is the

last year for which figures showing the total Virginia production for charcoal pig-iron are listed separately from those showing total coke pig-iron production, but the record shows that up to and including the year 1888 there are figures available for the combined tonnage of charcoal pig-iron and coke pig-iron produced in Virginia, and that this combined production, except for a slight decrease in 1886, mounted steadily during each year from 1883 to 1888 inclusive.

Of course, just how much of the total production after the year 1882 came from the furnaces along New River is unknown, but, in view of the fact that during that year (the last for which separate records of these furnaces are available) the furnaces along New River produced three-fourths of the entire Virginia tonnage of charcoal pig-iron (R. 1730); in view of the fact the record shows that charcoal pig-iron continued to be produced in Virginia at least until the year 1888 (R. 1730, 1749-50); and particularly in view of the fact that the record shows that the total combined annual production of charcoal and coke pig-iron produced in Virginia from 1883 to 1888 increased between those years, it is only reasonable to assume that the furnaces along New River continued to contribute to the total Virginia production. On the other hand, in view of the foregoing, it is wholy unreasonable to assume that, either with the close of the year 1882 (the last for which separate records of the individual furnaces are available) or with the close of the year 1884 or 1885, as counsel for petitioner suggested (R. 1749), the furnaces along New River closed down and failed to contribute a single ton thereafter to the total Virginia production.

However, putting aside the unreasonableness involved in the assumption that the furnaces closed at such time, nevertheless the fact remains and the testimony of various witnesses shows that this was not the case. Thus Dr. Holden testified that the records indicate that the furnaces along New River did not cease production, but instead con-

tinued to produce (R. 1749-50). This testimony is borne out by the witnesses Isaac Huff (R. 1562-5) and A. Moore (R. 1557), who testified that Boom Furnace, for example, continued operations for a number of years after the Cripple Creek Division of the N. & W. R. R. was placed in operation (in 1886) and this is further supported by petitioner's own witness Howard, whose testimony shows that the Boom Furnace continued to operate at least until the opening of the Cripple Creek Division (R. 213-4).

Hence, it is clear that, although the short period of experimental pig-iron boating ceased in 1882-83, nevertheless, inasmuch as the production of charcoal pig-iron by the furnaces along New River continued for several years thereafter, such cessation of the boating could not have been due to the closing down of the furnaces.

(4) *Steamboats.*

Petitioner cites a report predicting the improvement would benefit light steamboats (Pet. Br. 43) and a reference to a small steamer operating above Radford (Pet. Br. 37) which leads us to a consideration of New River "steamboating."

The first steamboat on New River was built at Hinton in 1878 by the New River Steamboat Company (Ex. 35, R. 2346). Her glorious expectations were sufficient to stimulate an enthusiast among the Hinton citizenry to pay $100 for the high privilege of having the craft christened the "Cecilia Miller" after his wife (R. 469). After being launched in the middle of December of that year (Ex. 35; R. 2346) the "Cecilia" made a few trips at high stages of the river and then was withdrawn because she was "thought to be rather to large for the navigation intended, * * *" (*id.* R. 2346) and this despite the fact that she drew "when light and under way *less than 12 inches*" (id. R. 2346).

The father of petitioner's witness, Z. V. Burk, organized a company which also built a steamboat (R. 425). It operated for a short time near Hinton and then the ma-

chinery was taken off and the hull left on the river bank (R. 427). Another steamboat, which operated for a short time in the vicinity of Hinton, was the Hodge boat. Its career was short but the memory of it, long. Its hull may still be seen near Hinton where it lies in state on the rocky bed of New River (R. 414).

The most extensive trip geographically ever taken by any craft of the steamboat order was a trip made by Robert C. McWane's boat, the "Altha", from Radford to Hinton. This boat was built by McWane with the objective of engaging in the transportation business in the short improved stretch above New River Bridge at Radford (R. 1657-8). On the first trip with the boat to Ingle's Falls (2½ miles above the bridge) he became apprehensive that his venture was a mistake (R. 1665), which apprehension was confirmed in the course of a few trips on this stretch of the river. As a consequence he decided to take the boat to Hinton where he had understood that there were 8 or 10 miles of good water (R. 1660). He waited for a rise in the stage of 5 or 6 feet and then made the trip to Hinton, which he described as "just one series of chute the chutes all the way down, over one falls after another. In some places we made a sheer drop of 5 or 6 feet and struck the water with such force that I was fearful many times that we would jar the engine loose from the beams and put our power plant out of commission" (R. 1661).

However, they were unable to do anything with the boat at Hinton (R. 1661) and so McWane sold to John W. Eades at a price of $65. the boat which had cost him $1100. only the year before (R. 1661). Eades had the boat shipped to Lynchburg by railroad and used it as a tugboat on a short stretch of the old James River Canal (R. 1661).

There were two or three other attempts at steamboating on New River between the time of the "Cecilia" and that of the "Altha". However, each of the subsequent attempts suffered the same fate as had the first steamboat, the "Cecilia". The story of the "Cecilia" is

the story of all steamboating on New River. Indeed—at least viewed in retrospect—it may truly be said of the "Cecilia" that she represented both the Alpha and Omega of New River steamboating.

The evidence on this subject clearly sustains the trial court's statements that

> "this attempt at steam navigation was likewise purely local and notably unsuccessful * * *. In each instance they (attempts at steam navigation) were local to short stretches of improved portions of the river and were of short duration. They were merely the manifestations of a spirit of impractical optimism, with perhaps a tinge of curiosity" (R. 116).

Petitioner has heretofore attributed (App. Supp. Br. 194) the lack of success of steamboat navigation to the fact that "the boats built were not suitable for navigation on this river," but a verity it is that from the time of the "Cecilia" to date no steamboat has ever been built that was suitable for navigation on "*this* river".

(5) *"Stunting".*

The petitioner, apparently realizing its complete inability to establish practical use of the river in normal or customary trade or travel, sought to supply this deficiency by arranging some exhibition or "stunting" trips on the river. Accordingly, it had its employees Gerdes and Gragnon (who later testified as to this stunting) load a 16-foot motor-boat in a truck and take it to various parts of the river for the purpose of putting on this exhibition both a few days before the opening of and likewise during the midst of the trial of this case.

In addition, Gerdes took a small motor-boat down to the London pool and the Hawks Nest pool and finally demonstrated to a gasping world that all that was needed in order to navigate these two pools was a waiting truck to get the boat from one pool to the other. Gerdes and

Gragnon further demonstrated to their own satisfaction that it was physically possible to drag this outboard motor through Bull Falls (R. 942), through Harvey's Ledge (*id.*), through Wiley's Falls (*id.*), through Peters Mountain Falls (*id.*), and through Shumate's Falls (*id.*), Gerdes and three of his assistants (all wearing life preservers, lest they violate the Engineers Department regulations!) (R. 954) made a second attack on Bull Falls on July 27th, 1936, amazing themselves by getting their outboard motorboat—this time equipped with a propeller guard—through Bull Falls[1] (R. 948).

The witness Gragnon states that this was done not with a view to testifying in this case but for the "purpose of replenishing the store of knowledge of New River" (R. 1223). In just what respect the "store of knowledge" was replenished is not clear, but, irrespective of the purpose of these "stunts", they, of course, have no significance in so far as the issues of this case are concerned.

No question is answered after the completion of these "stunts" that common sense could not have answered before. Obviously, it is physically possible to do any number of things which lack the characteristics of being practicable, let alone economically feasible.

Undoubtedly, with proper machinery, hoists, etc. plus the expenditure of sufficient energy and money, it would be physically possible to pull a boat even larger than the

---

[1] Gragnon testified that this outboard motor boat drew 2½ to 3 feet when operating with a full load at maximum speed (Pet. Br. 55). It should be noted however that Gragnon admitted that the boat drew only 8 or 10 inches of water when similarly loaded, except possibly for the absence of the motor weighing about 112 pounds (R. 1194). However, the weight of such a motor (if the boat were kept on an even keel) would increase the average draft of the boat by less than one-half inch. It is evident from the photos (Exhibits 149 and 150) that, when passing through the rapids of Bull Falls, the boat was kept on a fairly even keel by means of having men in the bow. Thus, it seems on the basis of the pertinent photographs that the boat did not draw more than 10 or 12 inches in going through Bull Falls.

craft used by the petitioner's witness up over any of the numerous falls of the River. Indeed "stunsters" have demonstrated that it is physically possible to roll peanuts from one point to another, using the human nose as the motivating force, or that it is physically possible for a professional strong man (if he is willing to let his hair grow) to pull an automobile with the hair of his head. However, the rank and file or mankind have not regarded the transportation of either peanuts or automobiles by such methods as being practicable or economically feasible. They are merely "stunts", a demonstration of physical possibility, not economic practicability. Similarly the Gerdes-Gragnon nautical efforts of 1936 were merely "stunts"—a demonstration of physical possibility, not economic feasibility.

(b) The nature and scope of the Federal Work were insignificant as to aim and ineffective as to accomplishment.

Petitioner (Pet. Br. 43) refers to the report of the Chief of Engineers which contains a statement of the plan of improvement of New River, which leads us to a consideration of what was contemplated and what was accomplished.

Apparently what the local promoters of the scheme for obtaining Federal funds for work on the River proposed was to create a water highway connecting the mineral deposits of Carroll and Wythe Counties, Virginia, with the coal fields of West Virginia.[1] Whether they were more interested in providing such a connection or merely in attaining expenditure of Federal funds in their locality is another matter. At any rate, there is some question whether Congress and the Army Engineers had the same intention as was expressed by the promoters, as may be seen from a statement appearing in a memorandum transmitted to the Senate by the Secre-

[1] "the object of the improvement, as expressed by the promoters of the scheme, is to connect the iron, lead and zinc deposits of Wythe County and the copper of Carroll with the coal of the Kanawha fields" (Rep. of C. of E. 1873, Ex. 31, R. 2287).

tary of War April 18, 1913 (Sen. Doc. 15, 63rd Cong., 1st Sess., p. 20), where it is stated:

> "* * * it was not contemplated by the Engineers of the Army or by Congress to make a continuous navigable waterway of this stream, but only to afford access by water to the railroad as it was then located, * * *" (Ex. 47, R. 2441).

Whatever may have been the conception and scope of the Federal work, its nature was insignificant, as is evidenced by the fact that it was proposed only to construct a channel 30 feet wide with a depth of 2 feet below "lowest water".[1]

Let us now examine the facts as to actual accomplishment, especially compared with what was originally proposed:

First, the 2-foot depth "below the *lowest* water" was not attained. The report of the Chief of Engineers 1879 gives testimony as to this failure, stating:

> "With such grades, a depth of not more than about 2 feet (equal to an *available* low water depth of *about 18 inches*) could be made; and this was finally adopted and worked for throughout.
>
> "By extending the side-walls somewhat, and the occasional use of short wing-dams (the rock excavated for channels was used for these purposes as far as it went), it is thought an available ordinary low water depth, of from *20 to 23 inches*, can be made at very reasonable expense" (Ex. 35, R. 2346).

Again in the annual report of the Chief of Engineers for 1881 the plan is stated as calling for a channel, not 2 feet deep at "lowest water" but "2 feet deep at ordinary low

---

[1] "*Improvement of New River, from Lead Mines in Wythe County, Virginia, to mouth of Greenbrier River, West Virginia.*—The plan adopted for the improvement of this river contemplates a channel-way *30 feet wide* and *2 feet* deep below the *lowest* water, suited for the keel-boats now in use, but at the same time capable of utilization and adaptation, at *some future day*, in a *further improvement* of the navigation for light steamboats, should means be provided therefor" (Rep. of Ch. of E., 1876, Ex. 34, R. 2326).

water and *18 inches* deep at extreme low water, * * *'' (Ex. 37, R. 2381).

This change of proposed minimum depths from 2 feet to 18 inches may have been prompted by any one or all of several difficulties which were observed by the engineers in the course of the actual work and some of which apparently had not been taken into consideration prior thereto. For example, Captain Cuyler discovered after he had conducted a series of gagings, that

> "* * * observations extending over some time and nicely conducted are required, *so great* and so *sudden* are the *variations* in the *stages* of this river, and so many *anomalous features* does its upper course of 128 miles present'' (Ex. 34, R. 2331).

And later, in the following year, he states:

> "A study of (gage) readings * * * shows some *anomalous features,* due, it is believed, to special local conditions predominating at each locality; on no gage did synchronous readings give corresponding levels for the water surface, the differences being as small as ⅜ inch, and as large as 5½ inches, and apparently not governed by any periodic or other continuous and distinct law or ratio, but subject to *unaccountable fluctuations;*" (Ex. 35, R. 2339).

Further difficulties were observed in the way of very limited depths. Of one of the shoals, viz., at Peak Creek, on which his men had been working, Captain Cuyler says:

> "* * * the map shows this; the natural channel running from ¾ of a mile over a gravel slope underlaid by flat rock no lower than 1 foot, with the river over 400 yards wide, and most of its water in the deep pools barred by ledges on the other (easterly) bank. As was to be expected, *4 to 6 inches* of water was often alone available, and no loads at all could get over;'' (*id.* R. 2339-40).

Again, a most important problem was presented in connection with the attempt to achieve adequate depths by

blasting sluiceways through shoals and rapids. Of this Captain Cuyler observes:

> "Here the simple go-ahead work of blasting down to a depth and clearing out obstructions is ineffective, as *by as much* nearly as the *bottom* is so *lowered* does the *surface fall shortly afterwards*" (Ex. 35, R. 2341).

That is, the sluices served to drain the pools to the extent of lowering the water levels in them.

Possibly the idea of giving up the originally proposed depths resulted from the experience gained during the summer of 1879 when the river dropped 7 inches below the zero, which had been established as ordinary summer low water (Ex. 36, R. 2364). In any event and irrespective of what the cause for doing so may have been, it is clear that the minimum depth that was finally adopted was 18 inches, instead of 2 feet. Colonel Craighill makes this clear in his report to the Chief of Engineers in 1881:

> "The general plan of improvement adopted . . . has consisted of making a channel 2 feet deep at ordinary low water and *18 inches deep at extreme low water.*" (Ex. 37, R. 2381).

However, that the attainment of even such lesser depth was a hope rather than a reality[1] is shown by the fact that in the year 1882 the river dropped even lower. The Greenbrier division of the river at that time reached a low of "1 foot below zero" (Ex. 38, R. 2385); the middle division of the river a low of ".92 foot below zero" (Ex. 38, R. 2386); and the upper division of the river reached a low of ".88 foot below zero or ordinary summer water" (Ex. 38, R. 2388).

---

[1] Captain W. E. Craighill in 1903 in a report to the Chief of Engineers respecting the work, contents himself, on the matter of depths, by saying, not that the work gave an 18 inch *extreme* low-water depth or even that an 18 inch *low*-water depth was *attained*, but that the work was "*intended* to give a depth of 18 inches at *low-water*" (Ex. 565, R. 2837).

Smith, writing to Colonel Craighill with respect to the effect of this low water on the season's work on the lower division, the middle division and the upper division, respectively, states:

> "The extreme low water affected the cost of this work less than on either of the other divisions, but still it was somewhat more expensive, as the estimates were made for the work with a depth of water nearly *6 inches* greater than it proved to be (Ex. 38, R. 2385).
>
> • • • •
>
> "The extreme low water, this season, increased the amount of work at the points cut through at least fourfold; hundreds of feet had to be taken out, which, with the water *6 inches* higher, would not have had to be touched (Ex. 38, R. 2386).
>
> • • • •
>
> "The same difficulties attending the work on the middle division, with regard to labor and low water, were experienced here" (Ex. 38, R. 2388).

Indeed, in appellant's own evidence appears a report by U. S. District Engineer Conklin[1] made as recently as 1934, which states that the low water depth in the channel varies from six feet to only *"a few inches"* (Ex. 145, R. 2710).

Thus, after working on a channel designed to provide a minimum depth of 2 feet, it appears doubtful whether an actual minimum depth of more than 1 foot was attained.

Likewise, the originally proposed widths were not achieved. Instead, as shown by the annual report of the Chief of Engineers for 1883,

---

[1] Petitioner has heretofore (App. Br. in C. C. A. 20) criticized, as misleading, the description of the river given by Col. Conklin, which description is quoted by the Trial Court in its opinion. However, criticism by petitioner of Col. Conklin's description came with poor grace at that late date, in view of the fact that Col. Conklin is one of the Engineers of the War Department whom petitioner could have produced as a witness (as both the Trial Court and respondent requested) for the purpose of having Col. Conklin give more precise information had petitioner entertained a sincere desire to obtain more precise information.

> "* * * the *width* of channels on the middle and upper divisions has been *reduced* to *20 feet*, and on the former *to 10 feet* for several miles, to allow iron to be shipped from the furnaces above" (Ex. 39, R. 2395).

Actually, that report shows that, of the 29¼ miles of the middle division of the river on which Federal work was done, *14¾ miles, or more than half thereof, was only 10 feet wide* (*id.* R. 2395). No further work was ever done despite the fact that the assistant engineer, in charge of the work, was clear that such channels were inadequate. He states:

> "*Ten-foot channels* are not wide enough, as the current is too *rapid* for the boats in use" (Report of C. of E. 1882, Ex. 38, R. 2387).

Furthermore, and irrespective of whether or not Congress and the War Department initially intended to carry out the proposals voiced by the promoters, it is clear that any such thing as continuous navigability-in-fact was never accomplished.

Intimation that such would be the case began to appear in the reports of the Chief of Engineers as early as 1879 when, after the experience gained by two seasons (1877-1878) of actual work on the river, Captain Cuyler, the engineer in charge of the work, writing with reference to the necessity of pushing the work on the Middle Division up to the mouth of Mac's Creek, pointed out that the mineral industry was the *only one* which would make *full use* of any improvement, if and when completed, stating:

> "This point is in this region the down-stream boundary of an extensive and rich mineral producing district, which is the *main interest* to be served by the improvement, and which *alone can* and *would* inaugurate fully use of it when once made. To *utilize*, then, the work already done commensurately with its cost, necessitates as immediate a completion to Mac's Creek as possible" (Ex. 35, R. 2340).

Captain Cuyler also took pains in his report to consider critically the work that had been carried on up to that time and to make recommendations as to the type of future work to be done, and while he stated in this connection (presumably out of deference to his predecessor who made the survey and helped plan the initial work on the project) that "the practicability of the project had been fully proven", nevertheless this was only by:

> "*abandoning* the idea of selecting the present natural sluices to patch up, not only for the contemplated steam-navigation, but even for the *bateau* navigation and *rafting*" (Ex. 35, R. 2340).

It was necessary in his opinion

> "to adopt a more *general* and *radical* method to effect a permanent improvement than has heretofore been tried" (*id.* R. 2340).

He recommended the

> "free use of dams to collect into pools the water, which constructions should be *much* more elaborate than any heretofore attempted" (*id.* R. 2340).

stating that

> "The mere rock ledges, *per se*, form a minor type of obstructions, as always they have above and below them pools more or less deep, and blasting through them readily gives a good sluice with regular grade. The velocity is *certainly hereby injuriously affected;* but low regulating dams or long training walls below always can be put in to better distribute, and thus rectify this *induced obstacle* to navigation" (*id.* R. 2340-1).

However

> "With the shoals and rapids the case is different. Here the simple go-ahead work of *blasting* down to a *depth* and *clearing* out *obstructions* is *ineffective, as by as much* nearly as the *bottom* is so *lowered* does the *surface fall shortly afterwards*" (*id.* R. 2341).

Hence Captain Cuyler stated it was necessary that

> "The supply of water must, firstly, be augmented by going up to the very head of the obstruction, probably 1, 2, or 3 miles up, and constructing the waterway by building out bodily from the banks low but solid dams, followed down stream by guide-walls. In such structures I should use largely brush in mats or bundles; for, while the river does not carry in it much sediment, and the dams would generally find rock to rest on, yet it would allow of broad bases, and would make thus not only a cheaper but a more water-tight dam than rock alone.
>
> "I should project for future work more construction of this kind, much less blasting" (*id.* R. 2341).

Captain Cuyler recognized that the new system which he was recommending would be more expensive stating:

> "The new system • • • would probably entail a cost beyond that of the original estimate for this improvement" (*id.* R. 2341).

and that it

> "would be unquestionably slow of execution, too slow for those requirements other than the engineering ones; the main dams, all requiring correct location, would necessitate a study of and acquaintance with, the river throughout the year—a residence on it, by the engineer in immediate charge. In this country, where to move from point to point, to transport supplies, etc., is slow work at best, it is impossible for the engineer to properly manage works spread over any considerable stretches, and yet in any extended operations, to attain the desired execution, such spreading out is necessary, as 100 men to a locality and camp are about the advantageous working maximum. On this basis, working on the present plan, not more than $18,000. can be expended in one season, so short are these. Every preparation must be completed before work actually begins, as also the essential duty of examining and locating by permanent marks the works proposed for that season; this would require the maintenance of a small permanent party making

> surveys, maps, etc., and a large quantum of labor and exposure for the engineer" (*id.* R. 2341).

but he viewed this "*new system*" as necessary "to effect a *permanent improvement.*"

Furthermore Captain Cuyler observed that the open river system of improvement

> "* * * from Hinton up to Sifford, 64 miles * * * will, I think, be found to be but partially applicable" (Ex. 35, R. 2341);

instead

> "the dimensions of the river and of the main falls will necessitate the construction, at these latter, of *locks* and *dams;* with the *open sluices,* some *system of towing up ascending boats,* by *cables* on the bottom, the motor being steam or air, located on the banks, or better, on large floats fixed in the still upper pools, will, in my judgment, be found *essential*" (Ex. 35, R. 2341-2).

Despite these recommendations, in Captain Cuyler's opinion, necessary "to effect a permanent improvement",[1] there is no evidence that any of them were carried out.

After the above report of Captain Cuyler little is said in ensuing reports concerning the creating of a continuous navigable waterway.

The report of the Chief of Engineers in the following year, 1880, for example, gives primary consideration to a local and minor objective, viz.: that of carrying the work on the lower division far enough up the river to reach intersecting wagon roads. As to this the report states:

---

[1] However, even with the "new system" of elaborate improvement work which he recommended as necessary "not only for the contemplated steam navigation, but even for the bateau navigation and rafting", an accomplished fact (which it never became), nevertheless, Captain Cuyler did not envision continuous navigation for the stream; instead he merely viewed the river, if so improved, as being of a "real and decided *local* benefit." (Ex. 35, R. 2342).

"Notwithstanding the heavy grade a *large number of wagons,* laden with agricultural products of a rich portion of Mercer County, *daily uses a road* which crosses the river by ferry just above Bull's Fall, and leads thence down the stream to the Chesapeake and Ohio Railroad at Hinton.

"Going up farther, to the mouth of Indian Creek, *another road* is met, which leads, with a fine grade, to the Red Sulphur Springs and beyond, and as this celebrated watering place is only 6 miles distant, it would be a pleasant trip for persons wishing to visit it to take boat at Hinton, pass delightfully the few hours occupied in making the 16 miles in relaxation from railroad travel and in viewing the beautiful scenery. Arriving at the point referred to, coaches could carry them to their destination.

"The *best road* in the country, however, comes to and crosses the stream at the *mouth* of *Lick Creek,* 20 miles above Hinton. By this route nearly all of the marketable stuffs from the rich counties, Tazewell, Mercer, and Monroe, seek an outlet. Taking this into consideration, it is regarded as *very desirable* to push the improvement to that point next season, if possible" (Ex. 36, R. 2366).

Likewise, in the report of the Chief of Engineers for 1881, almost nothing is said with respect to the original proposal beyond the suggestion that a survey be made at Shumate's Falls and Foster's Falls with reference to the possibility of improving these places by the construction of locks and dams (Ex. 37, R. 2370-5); instead, a minor objective, viz., that of carrying the improvement to Lick Creek in order "to get freight from the rich counties adjoining * * *" is again mentioned.

That no water highway connecting the mineral deposits of Virginia with the coal fields of West Virginia was even close to achievement appears also from the fact that large unimproved gaps were left in each section of the river on which work was done. Of the total distance of 191½ miles from Hinton, West Virginia, to the mouth of the Wilson, only on about one-third thereof was improvement even

attempted. The report of the Chief of Engineers for 1883 (Ex. 39, R. 2402) shows this:

> "From Hinton, W. Va. to mouth of Wilson Creek, Virginia, the extent of this work is 191½ miles. Lower Division 86½ miles; improved 26 1/5 miles. Middle Division 43 miles; improved 29¼ miles. Upper Division 62 miles; improved 5⅓ miles. Total 191½ miles; total improved 60.78 miles."

Thus, between the head of navigation on the Kanawha and the mouth of the Wilson there still remained after the federal work was done unimproved gaps as follows:

(a) A gap 68 miles in length from the head of navigation on the Kanawha to Hinton, West Virginia;

(b) A gap nearly 60 miles in length from New River Bridge to Wiley's Falls or Shoals;[1]

---

[1] With reference to petitioner's statement (Pet. Br. 38) that the river was improved "for 26½ miles above Hinton, to Wiley's Shoals", it should be observed that although some work was done in Wiley's Shoals, improvement work was not completed above Wiley's Falls. William Proctor Smith, Assistant Engineer, states (Ex. 39; R. 2399) with reference to this that such a large part of the appropriation was spent on Wiley's Falls that there was not enough money left "for the few shoals above" that had been contemplated for the season of 1882 (which was the last season of the Federal work on the Greenbrier Division).

In the same connection it should be noted that petitioner states (Pet. Br. 79) that the "Hinton-Glen Lyn stretch" is suitable for boats drawing 2 feet of water. Although not cited, petitioner's assertion is based on the depths which Alstaetter estimated would prevail on the improved stretch from Hinton to the *vicinity* of Glen Lyn. Petitioner heretofore, in discussing the "improved reach from *vicinity* of Glen Lyn to Hinton", has not improperly used the phrase "*vicinity* of Glen Lyn", as the equivalent of Wiley's Falls or Wiley's Shoals (App. Br. in C. C. A. 12) and Alstaetter likewise used this phrase. However, petitioner now lapses into the short terminology and refers to the stretch from Hinton to the *vicinity* of Glen Lyn as the "Hinton-Glen Lyn stretch" which is somewhat misleading. This is called to the Court's attention in order that the Court may not get the erroneous impression that the 30-mile reach from Hinton to Glen Lyn was improved. Instead, the upper end of the improved reach was practically at Wiley's Falls. The

(*Footnote continued on next page*)

(c) A gap of approximately 14 miles from Calfee's Ferry (the public one), near Allisonia, Va., to the Lead Mines; and

(d) A gap of 54 miles between the "Gulf" and the Mouth of Wilson.

Further evidence of the failure to carry out the original proposal of creating continuous navigation on New River appears in other reports of the Chief of Engineers. For example, the report for the year 1883 which was made after completion of the work on the Lower and Middle Divisions of the river, emphasize that navigation was not continuous. It states:

> "It has hardly been *practicable* to accomplish at *any one* of the *very many* points *needing* improvement all that has been desirable, but the worst places have been worked upon to the greatest extent and efforts thus been made to increase the available navigability of the river over as long stretches as possible, and to increase the facilities for *access* of the greatest number *to the railroads* touching the river, and thus

---

only work above Wiley's Falls was inconsequential, and even petitioner's witness, Gerdes, said that he could see no sign of a channel having been cut at Wiley's Shoals (R. 936) only about 26½ miles above Hinton—not 30 miles above Hinton as is Glen Lyn itself.

One further observation in relation to Alstaetter and to petitioner's citation of his report, viz., that contained in the War Dept. report of 1912 (Pet. Br. 54) is pertinent. It is that Alstaetter's consideration of the physical characteristics of the river led him to the conclusion that the "river between Hinton and Radford" was not "worthy of further improvement", and he "recommended that no survey be made." He noted that the river "partakes of the characteristics of a mountain stream, with very rapid current and bad rapids, and therefore navigation is dangerous on it" and that this swift current "could be obviated only by slack water improvement, which would require ten dams with a lift of 13 feet each, or their equivalent" (R. 2422, R. 2425), and his superior, Colonel Roessell, for the Board of Rivers and Harbors, reported to the Chief of Engineers that those expressing interest in the improvement recognized "that the great fall in the river would preclude any form of *continuous navigation*, except through slack water in the stream," and that physical conditions were "such that it could not be improved for *useful navigation except at prohibitive cost*" (Ex. 46, R. 2420).

> connecting with the eastern and western markets districts otherwise much isolated and *hitherto* dependent on *teaming* to railroad stations over *long and bad roads*" (Ex. 39, R. 2396).

Also from the same report is the following:

> "The navigation of the river not being *continuous* as yet, it is practically a *feeder* to the *railroads* which cross it and run along portions of it" (R. 2396).

And the report for the year 1886 states:

> "Hitherto the obstruction offered to navigation by Foster's Falls, about 6 miles below the mines, almost rendered it useless to expend the money appropriated for the division under consideration. The construction of the Cripple Creek Railroad, however, abrogates this and puts *this division on a par with those of Greenbrier and New River Bridge,* for *its objective point is a railroad* as well as that of the *other two,* and timber and minerals can just as easily be taken to market therefrom" (Ex. 42, R. 2412).

Again, in the report of the Chief of Engineers for the year 1887 there is this:

> "As *Congress has never given such a sum of money* as would justify the *proper beginning* of a *connected* project for a *continuous* navigation from the North Carolina border to Hinton, the effort has been to apply such funds as were supplied in *ameliorating* the condition of the river * * *."
>
> "* * * *As it is not likely Congress will in the near future supply the money necessary* to make Foster's Falls passable and thus *connect* the upper and middle sections, it is supposed the same policy should continue of *partial improvement* in connection with the railroads" (Ex. 560, R. 2826-7).

The lack of any attempt to accomplish continuous[1] navigability in fact is further evidenced by the statement of

---

[1] Petitioner's inference (Pet. Br. 43, footnote), that the references in the various Army Engineers' reports to the fact that navigation on the river was "not continuous as yet", means merely

(*Footnote continued on next page*)

Colonel Craighill, who had charge of the work, which is as follows:

> "For reasons often mentioned in annual and special reports, *no attempt has been made to give a continuous navigation* of the New River (which rises near the line between North Carolina and Virginia, runs nearly north, receiving many tributaries) to Hinton, on the Chesapeake and Ohio Railroad, where the Greenbrier empties into it. A short distance above the Falls of the Great Kanawha River, it unites with the Gauley to form the Great Kanawha River. The part of the River below Hinton is incapable of being navigable except at very great expense, and by resorting in some places to side canals" (Rep. of C. of E. 1887, Ex. 560, R. 2826).

And the futility of the attempted improvement on the upper division is emphasized in a paragraph of a sub-report by Colonel Craighill dated April 17, 1891, which paragraph was omitted when that report in turn was embodied in the printed report of the Chief of Engineers for 1891. This paragraph[1] was as follows:

---

that navigation could not be carried on at all times of the year, is simply an abortive effort at distortion. The statements of the engineers are clear. They refer to the fact that the Federal work had not been sufficient to make the river available for *through* traffic. This of course is obvious from the fact that the improvements were confined to three widely separated stretches which left large unimproved gaps on which no work was attempted. These separated local stretches of the river could at most serve as feeders for the railroads which cross the river. That petitioner's suggestion is a distortion of the meaning of the above-quoted phrase is clear from both the foregoing quotations from the Army Engineers' reports and the following quotation.

[1] Petitioner—critical of the Trial Court which embodied in its opinion this paragraph from Col. Craighill's report—has heretofore stated in its brief in C. C. A. (App. Supp. 73) that: "* * * the court below did not see fit to explain that the language quoted above was restricted to a section of the river far above appellee's project, where physical conditions were altogether different from those found in the reach between Allisonia and Hinton, * * *", and

(*Footnote continued on next page*)

"The last directions of Congress have been practically complied with by the expenditure of 75% of the last appropriation. The last work done, however, under those directions was a subject of ridicule by the community near its locality because of its *evident uselessness*, except to put money into the pockets of a few men and to lead to the probable control of a few votes. The expenditure of the remaining balance almost entirely in the *excavation of rock* on the *limited part* of the river to which it is specifically applicable under the law *would not accomplish* the *smallest useful result* and would in my judgment be a *shameful waste of public money*. It is recommended that it be covered into the Treasury as no longer required for expenditure" (Ex. 528, R. 2758-9).

In the statement of the Chief of Engineers to the Secretary of War, July 13, 1911, as quoted in a memorandum for the Secretary of War from the Chief of Engineers, May 19, 1916, on

"Pollution of the waters of New River and its effluent, the Kanawha River, by the flowing of ore washings, from the mines and furnaces located on the former river and its tributaries."

---

now states (Pet. Br. 38) that this paragraph of the Craighill report "related to the third stretch, above the Radford-Allisonia stretch and reaching upstream from Austinville (at mile 190) rather than to any part of the 111-mile stretch here in issue". Actually, of course, the improvement work referred to by Col. Craighill was the short stretch of Federal work beginning at the Lead Mines which are *only* about *15 miles* above *Allisonia*, not at some far distant place. But, wholly aside from this fact, there was no occasion for the Court to do any explaining, first, because the petitioner urged before the Trial Court that New River was navigable from its junction with the Gauley River in West Virginia to the mouth of its tributary, the Wilson, in Virginia, some 75 or 80 miles upstream from Allisonia—or, stated differently, petitioner urged, not only that the very part to which Col. Craighill referred was navigable but, also that New River was navigable for a distance of 55 or 60 miles further upstream; second, because the quotation itself contains the words of limitation, viz.: "on the *limited part* of the river to which it (the appropriation) is *specifically applicable* under the law," showing that it did not refer to the entire improvement project on New River.

there appears the following:

> *"There has been no useful navigation on New River at any time, and none is possible under existing natural conditions, nor without the expenditure of vast* and *prohibitive* sums in improvement work. While the discharge of ore washings in New River may produce conditions in Kanawha River injurious and obstructive to navigation, in the various ways alleged by the petitioners, it is probable that in most instances the effect is too remote, and too much complicated with other causes to warrant the action desired by the petitioners; and it is extremely doubtful that such action, if taken by the Department, would be sustained by the Courts" (Ex. 566, R. 2844).

The report of the Board of Engineers for Rivers and Harbors, 1912 (House Doc. 1410, 62nd Cong., 3rd Sess., Ex. 46; R. 2420) states:

> "Physical conditions are such that it *could not be improved for useful navigation except at prohibitive cost.* The board, therefore, reports, concurring with the views of the district officer and the division engineer, that *it is not advisable for the United States to undertake the improvement of New River from Radford, Va., to Hinton, W. Va.*"

And Lt. Col. George R. Spalding reported to the Chief of Engineers under date of October 24, 1930, that New River

> "*was not made navigable* in fact except for precarious and occasional navigation by the Federal improvements, and that it *is not now navigable* in fact or capable of being made so at any reasonable expense" (Ex. 579-C, R. 2864).

The non-navigable character of the river after the so called "improvements" is further evidenced by the report of the Chief of Engineers dated December 29, 1925, (*Ex. 572* (same content as Ex. 97, R. 2529)), wherein that officer states:

> "I am of the opinion that the data and information disclosed in the Department's records and reports do *not support* the conclusion that New River affords *a channel for useful commerce* or that it is *navigable in fact.*"

And with respect to the section of the river which Appellant has heretofore characterized as "the lower part", the Chief of Engineers stated:

> "That section of the river between its mouth and the town of Hinton, having a fall of about 735 feet in a distance of less than 60 miles, may be dismissed from discussion. This Department has reported that the *whole section is unfavorable for navigation* and that it *could not be connected with navigation in the Kanawha* by the expenditure of any reasonable amount." (*id.*)

He concluded:

> "The detailed, mile by mile, data given in the reports fully justify these concrete statements, and it seems unquestionable that the river was *not navigable in fact* in its *original natural condition.*
>
> It is my opinion that these *natural conditions were not changed by subsequent improvements to the extent of making the river* a highway for commerce" (*id.* R. 2530).
>
> . . . . . .
>
> "It is evident that the work executed by the Government during the years 1877-1882, *did not materially change the natural non-navigable conditions* of the river. The improvement effected was at most slight and fragmentary, and the small channels worked over are reported to have deteriorated due to the natural action of ice and the current". (*id.* R. 2531).

General Taylor further made it clear that the river *never was navigable in interstate commerce*, stating: "*Continuous navigation* on the river has never been possible, and

whatever commerce has existed has been *altogether local* apparently confined to the 25-mile section in West Virginia ending at Hinton" (*id.* R. 2531).

Subsequently on June 1, 1927, the Federal Power Commission, in response to the declaration of intention with respect to respondent's project, formally made the finding that:

> "Said river (New River) in the part thereof involved in said declaration is not 'navigable waters' within the definition thereof in said Act" (Seventh annual report of Federal Power Commission; Ex. 574-B, R. 2853).

Furthermore, the Federal Power Commission through Patrick J. Hurley, Secretary of War, and Acting Chairman of the Commission, on July 1, 1930, certifying to the Attorney General of the United States (through the President of the United States) the facts in connection with Defendant's Declaration of Intention, stated categorically "*New River is neither navigated or navigable-in-fact*" (Ex. 531, R. 2779).

In the light of all of the foregoing, it is respectfully submitted that the evidence clearly establishes that, in its certification to the Attorney General, the Federal Power Commission stated the truth.

4. *The petitioner failed to show practical use, or susceptibility for practical use, in interstate commerce of substantial and permanent character.*

(a) Testimony dealing with alleged uses of New River.

Petitioner's contention that there ever has been any practical or substantial use of New River is based upon a complete disregard of admitted and controlling facts and a romantic interpretation of the largely hearsay testimony of aged witnesses. The testimony upon which petitioner relies, when shorn of exaggeration and romantic interpre-

tation, consists largely of vague, uncertain and unsatisfactory generalities relating to events which the witnesses believe may have occurred during their childhood and is frequently inconsistent even with documentary evidence. Manifestly it would be inadmissible to consider such testimony apart from and in disregard of the definite and well-authenticated evidence, such as that relating to the physical characteristics of New River, which plainly established its non-navigable character. Such testimony, where inconsistent, would necessarily yield to the more authoritative and trustworthy evidence and the known facts, but, even when such testimony is unwarrantably considered apart from and in disregard of the other and more reliable and trustworthy evidence, it fails wholly to sustain the conclusion which the petitioner seeks to draw.

The respondent submits that the oral testimony may be fairly analyzed and appraised as follows:

(1) *Alleged uses during Civil War Era.*

There had been no use whatsoever of New River prior to the Civil War. Under the compelling stress of a war emergency, the Confederacy probably attempted to use the river to some slight extent for the downstream transportation of military supplies from Radford to the commissary at Narrows.

Manifestly such a use, if it in fact occurred, would deal with physical possibilities and not with practical operations and would be no evidence of practical and general public usefulness by the customary modes of trade and travel by water.[1] Later, the boats having been abandoned, it is not unlikely that some negro boatmen, having nothing but time on their hands, attempted to make some temporary use of these craft for a few years in some of the better pools—such as that around the Horseshoe (R. 2078). This attempted use was not only local in character but insignificant

[1] In this connection see footnote, p. 100 *infra*.

in quality and extent and falls far short of showing that practical and general usefulness as an avenue of transportation, which, under all of the decisions, is essential to the imposition of a Federal servitude because of capacity as a navigable water of the United States.

(2) *Alleged uses during period of unsuccessful Federal work.*

During the attempted Federal improvement of three local, isolated, and widely separated stretches of New River,[1] there was a temporary and experimental use of a short reach just above Radford and also a local use on a portion of the river just above Hinton, consisting largely of the floating of timber products *downstream*. It will be noted that these two portions of the river were separated by a gap of almost 60 miles lying between New River Bridge (above Radford) and Wiley's Falls and that such boating as there was took place during and after the attempted improvement which, on the petitioner's own evidence, was merely an attempt on the part of the Federal Government to make feasible in some measure local traffic to the rail-

[1] Any contention that these attempted local improvements were undertaken in the sections of the river most unfavorable to navigation is shown to be without foundation by a multitude of facts established in the evidence. But it is sufficient to point out that such a contention involves the assumption that the Gorge is the most favorable section of the river from the standpoint of navigation—an assumption which is patently untrue. The facts on this point were accurately stated by General Taylor, Chief of Engineers, as follows:

> "Of the 190 miles of river embraced in the adopted projects, work was carried on only on about 60 miles, and this 60 miles was divided into 3 widely separated stretches with long unnavigable reaches between them. *Work was limited to the most easily improved places* and effort made to so ameliorate conditions as to permit local navigation. The results were not satisfactory or important and Congress discontinued appropriations after 1886, less than one-third of the funds required for any effective improvement having been provided" (*Ex. 572* (same content as Ex. 97, R. 2531)).

heads[1] (at Hinton and Radford). In fact, even after the work on the lower and middle divisions was finished, the Chief of Engineers (1883) expressly states that there was no continuous navigation of the river:

> "The navigation of the river *not* being *continuous as yet*, it is practically a feeder to the railroads which cross it and run along portions of it" (*id.*)

from which follows the inescapable conclusion that prior to the Federal work as well there could have been no continuous navigation of the river.

(3) *Even the localized uses elsewhere did not extend into the 60-mile gap below New River Bridge.*

In view of the holding of the trial court to the effect that there was some sort of use of New River as far as 23 or 24 miles upstream from Hinton, and in view of the desperate effort of petitioner to stretch such holding of the Court, indeed to connect it with the reach immediately above Radford, where the trial court likewise found that there had been some sort of local use, it is pertinent to inquire into the evidence of any use of New River within the intervening 60-mile gap.

As regards any evidence of further use of New River: The testimony itself is negligible in quality and extent; it relates to such an inconsequential and negligible supposed use of the stream that, even were it shown by definite and

---

[1] Report of Chief of Engineers, 1883:

> "It has hardly been practicable to accomplish at any one of the very many points needing improvement all that has been desirable, but the worst places have been worked upon to the greatest extent and efforts thus been made to increase the available navigability of the river over as long stretches as possible, and to increase the facilities for *access* of the greatest number of the *railroads* touching the river, and thus connecting with the eastern and western markets, districts otherwise much isolated and hitherto dependent on *teaming* to railroad stations over *long and bad roads*" (Ex. 39, R. 2396).

reliable evidence, it would fall far short of that practical and general public usefulness which is essential to a navigable water of the United States. The testimony is manifestly the most unreliable, vague, uncertain and untrustworthy of this category of unsatisfactory evidence; and the testimony is plainly shown by other competent and more satisfactory evidence in the record to be largely erroneous.

Although there is little to be gained from a detailed discussion of this vague, generalized and uncertain testimony, we examine it in the light of the claims advanced by the petitioner with respect to the alleged transportation of (i) supplies for railroad construction, (ii) tobacco, (iii) fertilizer, and (iv) forest products. In this connection it will be recalled that in July 1881, the Norfolk & Western Railroad began the construction of an extension from New River Bridge downstream to Glen Lyn and thence on to the Pocahontas region (Osborne, R. 1649-50), and that the improvement of the Hinton section of the river by the Federal Government reached Wiley's Falls in October, 1881 (Ex. 38, R. 2390).

(i) Next to a military operation, the *building of a railroad* would seem to present the most urgent need for use of a rive. for transportation, particularly where the railroad is constructed along the banks of a river.[1] While

[1] Moreover the movement of machinery, material and supplies for a construction job does not represent a normal but only an emergency operation. The exigencies of temporarily conducting construction work in inaccessible places generally requires recourse to means and methods of transportation normally unfeasible and uneconomical, particularly where the provision of better means of access, such as a hard road, would require effort and expense justifiable only for much more extensive and permanent use.

In such cases the problem is not whether the movement of the machinery, material or supplies is practicable as a normal, regular or customary mode of transportation but merely whether it is physically possible no matter how difficult. Thus machinery may be moved into an inaccessible construction job on rollers; and even houses, with furniture and occupants undisturbed, may be and

(*Footnote continued on next page*)

there is some suggestion of a very unconvincing character that the river was used to supply the builders of this railroad *from an upstream direction*, it is believed beyond any question that no such use was made beside one or two experiments.

The material which would have lent itself to river transportation more readily than any other conceivable is bridge timber. The record shows that, with the two following noted exceptions, all of the bridge timber for the bridges on the N. & W. between the points above mentioned was framed at Belspring and was not floated or boated down the river, but on the contrary was carried out on work trains (Hundley, R. 1647-8; Gerald, R. 1548; Osborne, R. 1650). There were two trestles in Pulaski County, the timbers of which were not framed in that framing yard but were hauled to the sites of the trestles by team, or framed on the ground (Hundley, R. 1648; Osborne, R. 1650). Captain Osborne—who had temporarily been auditor and paymaster for the Norfolk & Western Railroad Company, partly in connection with some road-bed grading which had been under way by the Railroad Company (presumably for franchise-holding purposes) along New River in West Virginia between Crump's Bottom and Round Bottom, in July, 1881—was the one who took charge, as Division Engineer, of the construction work of the New River division from New River Bridge down to Walker's Creek.

This witness, whose testimony cannot fairly be questioned (and he was substantiated by the witness Gerald who was engaged in the work), testified that no supplies or materials were shipped by boat on the river to the work under his daily supervision, which work embraced the

---

sometimes are moved on rollers. But such instances of transportation are not a practical or ordinary mode of transportation or travel.

Manifestly, such an unusual use of a river, where the question is physical possibility and not practicability, would be no evidence of capacity for practical and general public usefulness by the ordinary modes of trade and travel by water.

division from New River Bridge to Walker's Creek and then the laying of track from Lurich to Pocahontas (Osborne, R. 1650-6; Gerald, R. 1647-9). It is to be noted that Captain Osborne did testify that one of the contractors along his (Osborne's) division told him that some bridge-iron had been transported by the Clark Bridge Company by boat from Radford to Belspring (which section consisted in the main of the longest and flattest pool on the whole river (R. 2078) and that he (the contractor) was going to try to use boats, but that shortly thereafter the contractor told him that the result of his attempt had been unsatisfactory and that he had abandoned the use of the boats (R. 1651).

It is also to be noted in this connection from the testimony of the witness Skeen (who testified as to the section around Lurich) that possibly one or two boatloads of hay or straw had been brought to the sub-contractor Pedigrew, who had charge of grading a portion of the roadbed between Narrows and a point near Glen Lyn (R. 340). Pedigrew, however, received his materials and supplies in the main by wagon from Lowell, a station on the C. & O. Railroad (Skeen, R. 342) and from this it is a reasonable inference that the material observed by Skeen on the river had originated from a point near its destination or else that the attempted use was not satisfactory; otherwise it would have been continued, because, as was brought out so pointedly by the petitioner, the roads in those days were in an almost impassable condition.[1]

Likewise the witness Snodgrass testified as to boating for this railroad construction, but he shows that the extent

---

[1] Furthermore, any inference that might be drawn from the testimony of this witness that there was any consequential use of New River, even during the exigencies of railroad construction, is negatived by the fact that Skeen states that he, the Dunns and the Spanglers engaged in wagoning machinery and supplies for Pedigrew, from Lowell, West Virginia, a station on the Chesapeake & Ohio Railroad (R. 342).

of his knowledge was limited to the observation of two bateaux unloading at the commissary at Eggleston (R. 304).

Surely, if there had been any substantial use of New River for transportation of supplies in connection with this railroad construction, there would have been available testimony of an entirely different order than testimony such as that of Skeen and Snodgrass.

Captain Osborne, by his evidence, establishes that the work on the railroad from New River Bridge to Pocahontas was not begun until July, 1881 (R. 1650) and that also there was railroad grading done by the employees of the Railroad Company (*not by contractors*) along the New River in West Virginia below Round Bottom in 1880 and probably some in the latter part of 1879 (R. 1652). He also showed that it was *contractors who did all of the railroad construction work in Virginia* between New River Bridge and Pocahontas, except that the track from about Lurich to Pocahontas was laid by the Railroad Company (R. 1650-6).

With reference to the testimony of Calloway, petitioner's witness, it is to be noted, first, that it was hearsay on his part, and that petitioner's witness Flannagan, whose assistant Calloway was, made no mention of any such boating. Calloway testified that the supplies were for the Norfolk & Western R. R. Co. and were checked out to *its order* and delivered to a *representative of the Company* (R. 483-4). This demonstrates that, if such supplies were taken by river from Hinton, it was to the grading work *in West Virginia*. Moreover, Capt. Osborne neither knew nor had he heard of anything carried by boat to the railroad work at Glen Lyn (R. 1654-5). Any weight that might otherwise be given to the testimony of Calloway was destroyed by his statement (R. 484) that the man upon whose order the material was delivered out "came in an *auto*"—*in 1883!*

The testimony of the witness Hoover to the effect that grain was boated upstream for the railroad construction men is likewise a matter of hearsay. He did not know that any work had been done along the river in West Virginia

(R. 417), nor did he know whether the contractor was working on the railroad or where he was working (R. 417). On cross-examination he testified that all he knew was that the boats came to the mill and "got the grain and took it up the river to the place where the construction of the railroad was going on" (R. 417).

Respondent submits that the rational interpretation of the somewhat hazy and conflicting evidence is that any boating from Hinton of supplies for use in connection with railroad construction was for the purposes of that work which was nearest Hinton, and hence did not extend further upstream than the work itself, namely, either to Mercer's Salt Works at Lick Creek or to Round Bottom. It is incomprehensible that supplies would have been boated from Hinton *upstream* to Glen Lyn (even if the river had capacity for navigation as the petitioner would have us believe), because the "navigation" from Radford *downstream* to Glen Lyn would have been much easier.

In fact, petitioner's witness Lewis M. Smith, who worked on the boats five or six years, and then owned and operated one himself for the next 15 years (R. 411), which embraced the period in question, testified that supplies for use in connection with the Norfolk & Western Railroad grading in West Virginia (as to which Captain Osborne testified) were taken "up there" to Lick Creek (R. 411); also, that he, Smith, never saw a boat above Lick Creek (R. 411).

The reference to this matter in the Report of the Chief of Engineers for the fiscal year ending June 30, 1882, to be sure, is that four keel-boats ran up to Shumate's Falls, 28 miles, carrying supplies to the New and East River Railroads (R. 2383). However, in view of the facts and circumstances cited hereinabove, it is evident that the author of the report must have been under a misapprehension as regards the upper limit of such boat transportation as took place from Hinton upstream in connection with the railroad work in point. That the official in charge should have been misinformed in this respect is not to be wondered at in view

of the fact that the subject-matter was not work of which he was actually in charge and hence did not fall within the scope of his official duty.

It is by no means unlikely that the mention of Shumate's Falls was due to the fact that it was a matter of common knowledge that, under even the most favorable circumstances and with the greatest of incentives for travel upstream from Hinton, Shumate's Falls constituted an insuperable barrier and hence represented the upper limit within which even any emergency or experimental use of the river could have been made at all.

Petitioner's witness, J. W. Reed, testified that he engaged in the transportation of railroad supplies; that he always unloaded below Shumate's Falls. However, at the time he was engaged in this work the Government improvement was not complete through Wiley's Falls (R. 406); in fact, Reed states: "I quit the river and went to railroading *before* they put the channel through there (Wiley's Falls)" (R. 409). Thus, even if this testimony were to be accepted at its face value, it is apparent that, inasmuch as (1) the railroad construction did not begin even at the "take-off" point (New River Bridge) until July, 1881 (Osborne, R. 1650), and (2) the report of the Chief of Engineers for 1882 (Ex. 38, R. 2382) states that a channel had been built through Wiley's Falls by the time work ceased, October 31, 1881, it follows that any transportation of supplies for railroad construction upstream from Round Bottom in which Reed engaged must have been of negligible duration or, more likely, a figment of his imagination.

Because, as Reed says, he was hauling for Lewis A. Pine (R. 406), who had the store at Round Bottom at the upper end of the West Virginia railroad grading, and because he admitted that he had not even seen the construction work at Glen Lyn *nor the store of his employer Pine, at Round Bottom* (R. 408), it is fair to believe that what little boating, if any, he was engaged in was *no further upstream than Lick Creek* (see testimony of Smith, R. 411; p. 104 *supra*),

and that his statement with reference to Shumate's Falls must have been suggested by the statement in the Chief of Engineers' report. The same thing must be true of the testimony of the witness Dickinson in this respect, who was not engaged in any such boating.

The evidence of the petitioner's witness Peters on its face, on account of its numerous contradictions, is unreliable. He said that he was engaged in the transportation of Norfolk & Western supplies by means of boats belonging to his father (R. 319-20), yet his father's boats were not built until 1885—at least two years after the completion of the railroad in the vicinity of Glen Lyn (R. 323). Again, he had working for him on the alleged boating some Medley, Smith, and others (R. 320), yet neither Medley nor Smith, who testified for the petitioner, claim ever to have engaged in any such boating. Indeed, witness Medley testified that he was then living with old man Tom Dickinson and carried dinner to the bosses of the people working on the railroad at Round Bottom, for whom some supplies were brought by boats to Lewis Pine's store at Round Bottom (R. 378).

That any use was made of the river for the transportation of any Norfolk & Western supplies to a point above Wiley's Falls is practically denied or at least shown to be negligible by the facts testified to by the witnesses Rufe Spangler, W. H. Spangler, S. L. Buckland, Captain Osborne, W. R. Gerald, W. R. Hundley, and petitioner's witness Skeen, whose testimony shows that the supplies for the building of the railroad from New River Bridge to Pocahontas were hauled in by wagons from New River Depot and Lowell on the C. & O. until work trains operating from New River Bridge took over that business (R. 1498-9, 1503-4).

It is submitted that the testimony regarding any transportation from Hinton of supplies for railroad construction greatly exaggerated whatever use there may have been of the river for that purpose, as compared with the pre-

ponderant transportation by wagon-hauling, and that in *any event any such use extended no further above Hinton than the upper limits of the railroad grading between Crump's Bottom and Round Bottom.*

(ii) While it may be true that some *tobacco* was taken down from Lick Creek and perhaps Round Bottom to Hinton, it is hardly within the realm of possibility that any such tobacco was moved down the river from above Wiley's Falls *subsequent to* the building of the New River Division of the Norfolk & Western Railroad to Glen Lyn, with its direct access to Virginia tobacco markets. It is to be recalled that the round trip from Hinton to Round Bottom took about three days (R. 401), which method of transportation would hardly have been used in preference to a five-mile wagon haul from Wiley's Falls to Glen Lyn. Moreover, there is not even credible evidence that *prior* to the building of the New River Division of the Norfolk & Western Railroad tobacco was boated from above Wiley's Falls down to Hinton. In view of all of their testimony the witnesses B. T. Johnson and Peters are hardly to be believed on that point.[1] What seems to be a complete disproof of any such contention is the testimony of petitioner's witness Dickinson, who lived on a farm on New River between Glen Lyn and Wiley's Falls on which there was grown tobacco which was transported, partly by boat, to Hinton.[2] This witness testified that tobacco from that section was hauled by wagon to

---

[1] See page 106 *supra*, and page 118 *infra*.

[2] "Q. The tobacco you raised and sent down the river you put on the bateau at Round Bottom? A. That is just where we put our tobacco on, about Round Bottom.

Q. You say the toll was 25¢ a hundred from there down to Hinton on the tobacco? A. That is my recollection, that that is what they charged, about 25¢ a hundred.

Q. When you were testifying about the traffic on the river *from the vicinity of Glen Lyn, you were referring to the shipping of tobacco from Round Bottom*, were you not? A. Well, yes sir, there in Virginia we would haul our tobacco down to the Round Bottom *or two or three miles below that.*

Q. You would put it on a wagon and haul it down there and ship it by water? A. Yes, sir" (R. 394-5).

Round Bottom below Wiley's Falls and there loaded on boats and taken down to Hinton (R. 395).

(iii) The alleged carrying of *fertilizer* by bateau from Glen Lyn down the river likewise is shrouded in a maze of uncertainties and inconsistencies. The testimony on that subject is that given by the witnesses Peters,[1] Medley, and Jim Smith. It is to be recalled that Smith and Medley worked for Peters' father and that Peters testified that he had charge of his father's boats, built in 1885 (R. 319-20; 353; 372, 376). These witnesses are inconsistent as to where the fertilizer was loaded on the boats and as to how it was taken through Shumate's Falls (R. 349-50, 364, 381, 385). At most any such use was seasonal and only occasional.

It is also to be noted in this connection that the witness Dickinson, who between 1863-1888 (R. 392) lived on a farm located on the river between Wiley's Falls and Glen Lyn (R. 391-2) and later at Crump's Bottom (R. 392-3), used fertilizer frequently, but that this was never brought to him *except by wagon* (R. 394-5). It is believed that testimony of this character, that is, by a person who had occasion to make use of this supposed boating, but who did not, is most eloquent in demonstrating that the "navigation" did not have that quality of usefulness which is requisite to the imposition of a Federal servitude.

(iv) The petitioner has made much of the moving of *forest products* by river. Fairly appraised, however, the record demonstrates that there was no such use of any

---

[1] "* * * We took a load of *fertilizer* down the river in the spring. I couldn't say where it had been hauled from or how it got to Glen Lyn from Dublin, but it was loaded on the boats there. I understood that it came from Dublin. It didn't come down the river—it was conveyed. I don't know whether the Norfolk & Western was running at that time or not. I couldn't say. If it was not running, it was hauled in there by wagon. We never hauled any fertilizer but one year. We hauled a load one spring. I can't recall how old I was when we hauled that fertilizer down there. I must have been sixteen or seventeen years old—maybe eighteen. I won't say for certain" (R. 328).

consequence except locally immediately above Hinton. Although petitioner, through its diagram and chart (Pet. Br. Append. opp. 48, 178), asserts over and over again that forest products were moved by the river from as high up as the Narrows, but those assertions can be based solely on the testimony of its witness James; and even that testimony is based in turn on nothing but hearsay on James' part.[1]

As to any suggestion of rafting from above Wiley's Falls, attention is invited to the testimony of the witness Buckland (R. 1511) and to that of the witness B. T. Johnson (R. 369).

Furthermore, the record shows that the *stave traffic*, which by comparison was far the most important in the locality above Hinton, *did not extend above Round Bottom;* indeed it is a fair inference that Round Bottom itself was too high up the river for substantial use even for moving forest products.

Thus petitioner's witness Wauhop, who was engaged in the most extensive stave operation on the entire river, testified that he cut one "yard" of staves at Island Creek (some miles below Round Bottom) but found that it was impractical to boat them down the river and too far to haul them to Glen Lyn (R. 466). This fact is substantiated by the experience of Buckland, who cut staves which he intended to have boated down the river from a point near Pendleton's Ferry (in West Virginia) (R. 1510), but which he finally had to haul by wagon to Lurich (Virginia) (R. 1511); also by the testimony of Adair who was engaged in wagoning staves from Round Bottom to Glen Lyn (R. 1526).

In the section of New River immediately upstream from New River Bridge (located just above Radford)

[1] "* * * My uncle and my father bought timber wherever they could. I heard them speak of going up as far as the Narrows and up Little Blue Stone and Big Blue Stone and anywhere along the three rivers that they could get timber" (R. 310-311).

there were instances of temporary and experimental local use. (See 68-73 *supra*). The goal of such sporadic local uses was, of course, the Norfolk & Western Railroad at the bridge, where there was a station called New River Depot or simply New River. However, it is noteworthy that in this locality, as elsewhere on the river, the limited local attempts to make practical use of the river took form primarily in movements of loads, if any, in a *downstream* direction. Thus, there is no indication that there was more than an occasional trip of a boat from the pool in the Horseshoe, below Radford, *up* to Central Depot (at Radford) or New River Depot, nor for that matter is there any evidence of more than an occasional trip *downstream* over the same stretch. See pertinent discussion at pages 114-5, *infra;* also footnotes at pp. 110-111.

It will be noted that, aside from those witnesses who refer to the Army Engineer work-boats being taken down from New River Bridge to Hinton in 1878,[1] the second (and this time certainly intended) movement of the Army Engineer work-boats from the upper river to Hinton, after the cessation of all work, in early 1883, with its attendant difficulties due to low water (Ex. 39, R. 2401), the

---

[1] It is plain, first, that these Government work-boats, which reached Hinton from the middle (Radford) division (Report of C. of E., 1879, Ex. 35, R. 2345), went down on a high "tide" (Knode, R. 1567) and in fact, at least some of the boats indeed in all probability had been washed a good part of the way down by the flood of September 13, 1878 (*id.* R. 1567), and, second, that, even if the movement had not been due to that terrific flood, it would at most have been intended as a mere part of the construction work, where the question was, not whether the ordinary use of the river was practicable and useful but, whether a single movement necessary to the construction work was physically possible, even though manifestly impracticable as a regular means of transportation.

alleged Crockett furniture transportation venture[1] and of course the feat of McWane, who managed to bring a power boat down to Hinton on a 5-foot tide,[2] apparently *not a single witness from the Hinton region knew of or had even heard of a boat of any kind coming down New River from Radford or any point above,* let alone covering that distance in the upstream direction.

Obviously, had there been any other instances of such "navigation", petitioner's thorough investigation and preparation of the navigability phase of the case, involving apparently a person-to-person canvass of the Hinton region, would have enabled it to produce at least one witness to testify to that effect.

Another indication that whatever New River boating there may have been was of a local character is the fact that the names of Quinn, Orbinson, Pack, Medley and Merchant, who boated in the locality of Hinton, were not referred to by the witnesses who testified as to the use of the river in the Radford locality. Similarly, the names of Tate, Beverly, and Myers, who are reputed to have boated above Radford,

---

[1] Indeed, it is significant that among the Hinton witnesses the outstanding happening on the river was the legend that on one occasion part of a Colonel Crockett's furniture was moved by bateau from Crump's Bottom to Radford. But, even assuming that the evidence did not belie the legend, the fact, that the one outstanding tale of New River 'travel' was the single movement of Colonel Crockett's furniture from Crump's Bottom to Radford, portrays the non-navigability of New River more eloquently than anything respondent could say.

It may be noted that on a subsequent occasion (Adair, R. 1525) Colonel Crockett had his furniture transported by wagon from Radford to Crump's Bottom (obviously a *downstream* river trip would be much simpler than an upstream one), which would seem to indicate that the Colonel's fame for having arranged the only trip from the Hinton region to Radford had been too dearly bought to lead him to seek additional laurels.

[2] McWane described the trip, which he took after waiting for a 5 or 6-foot tide, as "just one series of chute the chute all the way down, over one falls after another. In some places we made a sheer drop of 5 or 6 feet and struck the water with such force that I was fearful many times that we would jar the engine loose from the beams and put our power plant out of commission" (R. 1661).

were unfamiliar to petitioner's witnesses whose testimony related to the use of New River above Hinton.

Furthermore, it is noteworthy that, of the host of local "navigability" witnesses produced by petitioner, none testified that the limited local use outside of the 60-mile gap, between Radford and Round Bottom, was even sporadically extended in any worthwhile manner into that intervening section.

In this connection, and bearing in mind petitioner's own statement in the court below (App. Br. 13-14), that no improvement of the river was attempted between the vicinity of Wiley's Falls and Radford, it is of interest to note that some of the documentary evidence introduced by petitioner in the form of various Army Engineer reports is diametrically opposed to its contention that there was some continuous use of the Hinton to Allisonia portion of the river. Thus, immediately *after the work* between Hinton and the vicinity of Wiley's Falls, on the one hand, and between New River Bridge and the vicinity of Allisonia, on the other hand, *had been completed,* the report of the Chief of Engineers for 1883 contains the words "the navigation of the River *not* being *continuous* as yet" (Ex. 39, R. 2396).

Other portions of those Army Engineer reports are more specifically pertinent to the fact that the limited local use above Hinton did not extend upstream beyond Lick or Island Creeks, or at most Round Bottom (Ex. 545, R. 2806-A). Thus, in the report of the Chief of Engineers for the year 1882 it is stated that:

> "The work is now in Virginia, but as only a small point of that State puts in here, the work will essentially be for the benefit of *West Virginia,* as the Counties of Monroe and Mercer in the *latter State* will supply *all* of the freight, *until the improvement reaches the Narrows,* 40 miles above Hinton" (Ex. 38, R. 2385).

Manifestly, the significance of the foregoing statement is that the Virginians were unable to make any use of New

River, particularly not as a means of commerce by water with the section below Wiley's Falls (above which the Federal work had not been completed).

And in the report of the Chief of Engineers for the following year, 1883, it is stated that:

> "The improvement, *when it reaches a point 35 miles above Hinton, will give outlet* to Peterstown, Monroe County, West Virginia, a thriving place, about 2½ miles from the river, at which there are three mills with a capacity of 58 barrels of flour and one hundred and twenty bushels of meal per day, three tanneries using 1,500 hides per annum, three stores, one saw-mill, and one cabinet shop" (Ex. 39, R. 2399).

Surely, bearing in mind the fact that the "improvement" had at the time of that report reached the total, *and final*, distance of about 26 miles above Hinton, it is clear that the significance of the latter statement is that the inhabitants of the vicinity of Peterstown, Virginians, as well as West Virginians, would normally reach and utilize New River, if they were to utilize it at all, at and from "a point 35 miles above Hinton", and that those inhabitants were unable to utilize the river, in its then condition, for commerce by water with any of the country downstream from that 35-mile point.[1]

The situation becomes all the more apparent when one considers that such local use as was made of New River clearly was in the main—and of necessity—for the movement of loads, such as they were, *downstream*. Thus such use as there was above Hinton was primarily *downstream* to the Chesapeake & Ohio Railway at Hinton. (The upper limit of such local use has already been discussed at p. 99, *supra*.) Such use as there was above Radford was primarily *downstream* to the Norfolk & Western Railroad at New River Bridge.

---

[1] Apparently that point was at the mouth of Rich Creek, practically opposite Lurich, Virginia (See Ex. 545, R. 2806-A).

(4) *Dearth of personal experiences of commercial use by those of petitioner's witnesses who testified concerning vicinity of the Horseshoe.*

Such unimportant boating as took place in the locality of the Horseshoe (see Ex. 545, R. 2806-A) was of course limited in the upstream direction by the ever-prevailing difficulty of poling or pushing boats, even partially loaded, against the current and over the shoals and falls; and evidently was substantially limited on the downstream side as well, that is, by the difficult stretch beginning at the head of Siffords Falls (see Ex. 600, R. 2874-E). Downstream from that point there is, of course, a succession of important obstacles, including Siffords Falls itself, Big Falls at the Montgomery-Giles County Line, Snidows Falls, Peters Mountain Falls at the Narrows, Shumate's Falls, Wiley's Falls, etc. (see Ex. 545, R. 2806-A).

It is not strange, therefore, that the sum total of instances of commercial use personally experienced and testified to by petitioner's witnesses in respect of the relatively long Horseshoe pool and extending in either direction therefrom was represented by and limited to the insignificant bartering of farm products by the negro boatmen (R. 206) who for a short period following the Civil War apparently attempted to make use of the pool around the Horseshoe and on occasion went as far up as Radford; the transportation of about 500 bushels of grain in 100-bushel instalments from the Horseshoe to Radford (with a few loads of plaster or fertilizer brought back on the return trips) (R. 225); the movement of a few boat-loads of lumber downstream from the mouth of Little River to the Horseshoe (R. 434-6); and the temporary operation of carrying or ferrying construction materials for about two miles down to the Pepper Tunnel Bridge of the Norfolk & Western Railroad about 1900[1] (R. 202, 1652).

---

[1] Reference has been made (100 *supra*) to the fact that, under the exigencies of railroad construction, particularly when it be-

(*Footnote continued on next page*)

That this negligible and inconsequential use was purely local is demonstrated further by the fact that the name Bannister and the Bannister bugle or horn (Price, R. 346; Webb, R. 227; Linkous, R. 206), were unknown, except locally to the vicinity of the Horseshoe Bend, and were not known in the locality above Radford nor to the West Virginia inhabitants.

(5) *Testimony of local witnesses of petitioner largely lacked probative value.*

Of course, there can be no doubt that, generally speaking, the local witnesses called by both sides tried to be as accurate and helpful as they could be in dealing with matters long gone by and obscured by the frailties of human memory; but such testimony is subject to numerous and very serious faults which necessarily minimize, and indeed often destroy, its weight.

In the first place, much of such testimony deals with matters which are supposed to have happened long ago. We are all conscious of the tricks played by our memories. We are all familiar with the unconscious and perfectly normal romance which commonly grows up about things which we heard in our youth or which happened in our childhood. The summer sun is never so hot, the winter winds are never so cold, the snows never so deep as they were when we were boys. In the words of Mr. Justice Stone in *United States* v. *Oregon*, 295 U. S. 1, 19, such testimony is "often vague and untrustworthy, * * * because based on * * * unaided recollections over long periods of time."

Furthermore, these statements, drawn by witnesses from the wells of childhood recollection, are in many instances contradicted by clearly established and known facts.

---

comes necessary to reach an otherwise inaccessible point (such as that involved in the above mentioned operation, R. 202), resort may be had to methods of transportation which, although physically possible, are by no means economically feasible and which cannot by any stretch of the imagination be deemed one of the usual and ordinary modes of transportation.

For example, petitioner's witness, W. P. Snodgrass, testified that he remembered seeing boats in 1867 (R. 303). It was not until the Court reminded him that he would have been only one year old that he modified his statement to that of having seen the boats several years later (R. 303).

Hence, such testimony must be carefully sifted and must yield to clearly established facts and to evidence of a more certain and therefore higher order. One might well apply the statement of the Supreme Court in *Oklahoma* v. *Texas*, 258 U. S. 574, 586, with reference to a somewhat analogous situation:

> "The evidence bearing on this question is voluminous and in some respects conflicting. A large part of it deals directly with the physical characteristics of the river, comes from informed sources and is well in point. A small part consists of statements found in early publications, and repeated in some later ones, to the effect that the river is navigable for great distances,—some of them exceeding its entire length. These statements originated at a time when there were no reliable data on the subject, and were subsequently accepted and repeated without much concern for their accuracy. Of course, they and their repetition must yield to the actual situation as learned in recent years. The evidence also discloses an occasional tendency to emphasize the exceptional conditions in times of temporary high water and to disregard the ordinary conditions prevailing throughout the greater part of the year."

If this view is properly applicable, even to written statements, ordinarily at least prepared with more care than is attached to the casual conversations of the fireside, it must of course apply with even greater force to early recollections of a similar character.

The unreliability of such testimony may be plainly shown by a few examples.

Petitioner's witness Collins, with more originality than accuracy, avows that the bateaux which were accustomed to carry iron from the Mack Creek Furnace to Radford

would then continue on downstream to Hinton before returning to the Furnace (R. 218, 219, 223). Just what advantage the boatmen may have expected to gain by a 170-mile round trip *between the two railheads* at Radford and Hinton is something which both the witness and the petitioner have naively failed to explain. The utter absurdity of this witness's testimony may be fairly measured by his statement, that all of the falls of New River between Radford and Hinton (including, of course, those in the section of nearly 60 miles in which no improvement was attempted), have, chutes or sluices cut through them (R. 220-1).

The witness E. H. Linkous, whose qualifications for testifying in this case were based upon the fact that he had as a boy sold some eggs to some negro boatmen when he lived at Whitethorne, in the Horseshoe region a few miles below Radford (R. 206), had only hearsay knowledge as to any trips to or from Hinton (R. 206). On cross-examination he admitted that he had only seen bateaux on the river some three or four times a year during about the same number of years (R. 206). It is to be noted that, although this witness's home was located along one of the longest and flattest pools of the entire stream (R. 2078), his father never used a boat to transport the farm produce, which he sold in Radford, but always relied upon a horse and wagon (R. 206).

Aside from the fact that the petitioner's witness J. W. Flannagan was obviously prejudiced against respondent, he apparently confused what he actually knew about New River boating with the stories he had been told about it. He finally admitted that all of his testimony with reference to alleged trips to Hinton was based entirely upon hearsay (R. 195). This witness also experienced some difficulty in determining just how many bateaux he had ever seen at one time. He first said that he had seen as many as four or five together. When confronted with his statement, in the depositions in this case taken at Radford at the instance of the petitioner, to the effect that he

had seen only two bateaux at one time, he finally compromised on having seen three together (R. 191).

The witness Price, who gave his age as 76, admitted that he did not actually know how old he was (R. 347). He testified that he had lived at a point near the mouth of Tom's Creek all his life and that on a few occasions he had been allowed to ride downstream on a batteau from a point just below Barnett's Falls to Cowan's Mill[1] (a distance of about 3 miles); that once he had even ventured to come all the way down from Radford (R. 346); that he was told that boats went down to Hinton, though he himself had never gone there (R. 344). Obviously this witness did not and could not have known the destination of the boats which he occasionally saw on the Horseshoe.

Petitioner's witness B. T. Johnson, aged 75, who was accompanied to the trial by his physician, testified on direct-examination that he had had hogsheads of tobacco boated down to Hinton from Narrows, and that boats used to bring salt, coffee, sugar, rice and other products from Hinton up to points above Narrows (R. 365). On cross-examination this witness admitted that on November 10, 1931, i. e., when he was about five years younger, he had been interviewed with reference to any use which may have been made of New River, and that on that date he had given a signed statement in which he said, "never seen any use by boats. I tried to raft some logs myself, but too rough. Lost a lot of logs and gave it up. This was from Ripplemead down to Narrows" (R. 369). The necessity of petitioner's having to adduce such testimony as this reveals the fancifulness of its navigability argument.

---

[1] Reference has already been made to the pool-like character of that portion of the river around the Horseshoe, *supra*, pp. 102, 114. In fact, the five-mile stretch upstream from Sifford's Falls is the flattest portion of the river between the North Carolina line and its mouth (R. 2078), in striking contrast with the steep slope of the 40-mile section between the head of Sifford's Falls in Virginia and Round Bottom in West Virginia.

Petitioner's witness A. W. Snidow, aged 78, *supposes* that the bateaux, which were engaged in transporting military supplies from Radford to the Confederacy's Commissary located in Narrows, went on down to Hinton (R. 296-7). While the State of Virginia, under the dire necessity of the struggle, probably did bring a few boats and experienced boatmen from the James over to the New and attempted to make temporary and precarious use of that stream, there is certainly no justification for the witness's supposition that these boats went down to Hinton, particularly in view of the fact that at that time there was neither a settlement nor a railroad there.

This witness also states that the timbers for the Walkers Creek Bridge of the Norfolk & Western Railroad and for other bridges located at points below were boated down New River, although he did not actually see these timbers being boated (R. 300). This belief on the part of the witness is clearly shown to be erroneous by the deposition of W. R. Hundley, a foreman at the Norfolk & Western Framing Yard located at Belspring, who testified that, with the exception of the timbers used in the Wilson and Back Creek trestles, every chord used in the Norfolk & Western line from New River Bridge to Pocahontas was framed at the yard at Belspring and then transported by work-train as the road was built (R. 1647-8).

The testimony of A. W. Snyder, aged 81, relating to the alleged Civil War use by a few bateaux engaged in transporting military supplies to the Commissary at Narrows, is extremely vague and based almost entirely upon hearsay. A further indication of the unreliability of this man's testimony is the fact that he asserted that his father was boating sugar, coffee and molasses from Hinton up to Belspring some five years before Hinton was settled and before there was a railroad there or in that vicinity (R. 266).

(6) *High water in relation to local uses.*

In any appraisal of the extent to which the residuum of oral testimony, after sifting out that which is unreliable or patently unfounded, is indicative of isolated instances of actual use, no matter how local, it is important to differentiate further in respect of the conditions of stream flow. Thus various witnesses mention the fact that this or that accomplishment of boating or rafting on New River was possible only during or because of high water.[1] A colloquial expression for such excess in stream flow and water stage over and above the ordinary condition is "tide."

For illustration, whether voluntary or involuntary, the movement of the Federal Government's work boats from the upper river to Hinton following the flood of 1878 was accomplished on a "tide" (Knode, R. 1567). Similarly McWane with his motorboat had to await "a 5 or 6-feet flood tide"[2] (R. 1661).

---

[1] Regarding the significance of the requirement that for navigability in fact the stream must be capable of general and substantial use in its *ordinary condition*, and not merely in times of *high water* (which in the case of New River is necessarily temporary), see page 36 of Resp. Br.

[2] Petitioner makes a painful attempt (Pet. Br. 53) to discredit the statement of witness McWane that when he ended his maritime venture with his boat, the "Altha", by taking her from Radford to Hinton in the mistaken hope that he profitably operate the boat on the 8 or 10 mile stretch of good water that he had heard was available at Hinton, or find a purchaser for it there (R. 1660), he had the benefit of a "5 or 6 ft. flood tide" (R. 1661). For its purpose petitioner chooses to quote McWane as saying positively that he made the trip "between the 15th and 20th of September 1901" whereas actually McWane, testifying in 1936 regarding an occurrence in 1901, purported only to be approximate and used the words "As I recall" (R. 1661). Having so sought to fix the time, within which there happens actually to have been a rise in New River, viz., September 17 (Ex. 68, p. 26), petitioner proceeds to disregard the fact that the stream flows shown in water supply paper 536 are daily averages and that the peak flows are necessarily much greater, and then to the erroneous estimates of extreme flow, it applies a

(*Footnote continued on next page*)

Again, the witness Harvey testified that when he lived at Crump's Bottom in West Virgina, he had an agreement with Mr. Meadows who lived at Mercer's Salt Works (located at Lick Creek), whereby a load of corn should be boated down to Hinton at a certain time, if there was a "tide". Unfortunately, the hoped-for tide or high water did not make its appearance sufficiently soon, and Harvey therefore had to resort to the more reliable wagon haul to Hinton (R. 1637-8). With reference to the appearance of bateaux in the vicinity of Crump's Bottom, this witness also testified that

> "When the river was up—had a *tide*, you would see them, and when it was down, you didn't see them" (R. 1637).

Even when a tide did make its appearance, it was not always wholly beneficial. For example, the petitioner's witness Owen states that if the tide was too high, the boating became dangerous because of the impossibility of following the "chutes" (R. 248).

---

rating-table which, although petitioner saw fit not to designate the location or time of applicability, actually relates to a point about 5 miles away and to a condition some 26 years later than 1901.

However, a reading of McWane's testimony (R. 1660, 1663) shows clearly that this man of standing, who had been Resident Manager of the Radford Pipe Works, associated the time of this "flight" of the "Altha" with the removal of his family to Lynchburg in October 1901, it having occurred just before he moved from Radford, whereas *Ex. 68* (p. 26) shows that on September 29th, 1901 there occurred an unusual flash flood or tide which carried the average discharge of New River at Radford from 4220 second feet, on September 28th, up to an average of 22,700 second feet on the 29th, with, of course, a much higher flood-peak flow. In short, critical and honest analysis of the testimony necessarily points to this flood as the one of which McWane took advantage, apparently riding down the river on the receding tide.

Moreover, petitioner's own witness, Coleman, who accompanied McWane on this trip, although he was unable definitely to fix the time within six months, corroborated the McWane testimony by saying:

> "I think we had about a 5 ft. tide". (R. 200)

Even the loquacious Medley, the man who "didn't have time to keep count of nothing" (R. 384) and who made the most pretentious claims of all of petitioner's witnesses, stated that, when he made the alleged trip with the Crockett furniture, there "*was a tide* all right" in the river (R. 380).

J. H. Knode, who rafted logs through Ingles Falls (about 4 miles above Radford), testified that he always tried to wait for at least some "tide" (R. 1570). Sometimes such a tide was not forthcoming, and the rafts would be torn up in going through the falls (R. 1570).

With respect to the boating of pig-iron, which he unsuccessfully attempted for a short period, Knode states that the river was not deep enough during normal stages to accommodate the boats he used. On the other hand, when there was a tide in the river, the current became so rapid as to make it hazardous (R. 1576).

The witness Moore testified that he did not know how long the pig-iron boating continued—possibly off and on for 12 or 18 months—and that this boating, *due to the condition of the river, was not a continuous thing* (R. 1556).

The witness Buckland, too, testified to the fact that necessary as they were, tides had their *hazards*, for he said that in his youth he had rescued one, Alex Skeens, who had ventured to ride down on a raft which broke up just below the Wiley house when the river was several feet above its normal stage (R. 1511).

That tides or high stages of water were not of frequent occurrence is shown by the testimony of W. R. Gerald who for several years lived in the Horseshoe Bend region and without difficulty forded New River in a wagon day after day (R. 1547, 1552).

(7) *Any appreciable use of New River in West Virginia was not only limited to a short reach above Hinton but was not permanent in character.*

Petitioner, utterly without warrant, stated in C. C. A. that the Trial Court found the "river is navigable and has

borne appreciable commerce for a distance of 23 or 24 miles above Hinton * * *" (App. Br. in C. C. A. 10). Indeed, in its Petition for Writ of Certiorari (p. 13) it took like liberty with regard to the characterizations by the Court of Appeals and still greater liberty as regards the distances involved. In its brief here petitioner modifies its former categorical statement but still insists that, "although they" (the lower courts) "did not in terms" hold this lower stretch navigable, nevertheless "this is the clear inference of their discussion" (Pet. Br. 35).

Clearly even the latter position is unwarranted; yet petitioner immediately proceeds to attempt to elongate the 23 or 24 mile distance by several miles, e.g., by referring to the "27 mile section from Wiley's Shoals to Hinton" (Pet. Br. 35). Then, as though navigability were conceded for even a greater stretch, petitioner states, in absolute contradiction of the facts, that "There is no dispute as to the impairment of the navigable capacity of the section of the river between Hinton, West Virginia, and Glen Lyn, Virginia" (Pet. Br. 79).

The unjustifiable attempt of the petitioner to stretch the characterization (not a finding of navigability in fact) by the Trial Court of the 23 or 24 mile stretch above Hinton so as to include "Wiley's Shoals to Hinton" finds visual illustration in the unwarranted indication on the map captioned "Index of Photogr[illegible]phs" which it has inserted at the beginning of each of t[illegible] volumes Nos. II, III and IV of photographs labeled "Original Exhibits". By this misleading effort to extend the effect of what the trial court actually did hold, petitioner would have this Court believe that the characterization by the trial court was not limited to the 23 or 24 mile stretch above Hinton but included several more miles of stream, namely, Wiley's Falls or Shoals, which was the upstream limit of the federal improvement, whereas the fact is that there is nothing in the opinions of the lower courts to warrant such tampering with the distances set forth therein. In this respect the tactics of peti-

tioner are analogous to its showing on its Exhibit 196 (Pet. Vol. I of "Original Exhibits"), where there is an implication that, over the entire length where any federal work was done at all, there was attained a "2 ft. minimum depth of improved channel," whereas the fact is that the 2 ft. depth was merely the aim of the project and was actually not attained (See pp. 80-3 *supra*).

With regard to the above statements of petitioner, several observations are pertinent: First, the lower courts nowhere found or stated that the stretch from Hinton, W. Va., to Glen Lyn, Va., was navigable; second, the lower courts nowhere found or stated that the stretch between Hinton and Wiley's Falls or Wiley's Shoals was navigable; third, neither court, we submit, found that even the stretch for 23 or 24 miles above Hinton was navigable-in-fact.

Although it is undoubtedly true that use to some extent and of some character was made of that part of New River which extends as far upstream as Round Bottom, i.e., 23 or 24 miles above Hinton, and although the Trial Court in effect so stated, yet clearly such mention by the court is in the sense that it represents an upper limit of such use as there was, without in any way passing upon the character of the use or its extent, in point of distance or time, within the stretch above Hinton (R. 114, 115). Moreover, the section of the river upstream from such 23 or 24-mile reach above Hinton differed and differs from that reach both as regards physical characteristics[1] and as regards the federal effort

[1] One of these differences in physical characteristics is in respect of slopes. Thus, whereas according to petitioner's tabulation (App. Supp. Br. in C. C. A. 52) the slope in New River for the first 24 miles above Hinton is 3.7 feet per mile, in contrast the slope for the much longer section of 40 miles (which begins at the upper end of the said 24-mile reach and is the lower part of the 60-mile gap between Round Bottom in West Va. and Radford, Va.) approximates 5.5 feet per mile for such distance of 40 miles! (*Ex. 196*, Pet. Vol. I).

(*Footnote continued on next page*)

to ameliorate the obstacles to navigability due to the physical characteristics. Apart from these controlling considerations, however, it seems plain that the court did not hold the 23 or 24-mile reach above Hinton to be navigable-in-fact.

The actual use of this 24-mile reach was, of course, not uniform throughout. The lack of uniformity of use was due to several factors, of which one was that the federal work began at Hinton and progressed upstream. For that reason, as well as because of the natural physical conditions, the heaviest use was within a short distance above Hinton, it being impossible initially to make any use as far upstream as Round Bottom or even for half of that distance. The heaviest use was within a distance of from 5 to 10 miles immediately upstream from Hinton. The 8 or 10-mile stretch of good water above Hinton had been heard of even at Radford (McWane, R. 1660). This permitted some rafting of lumber and permitted staves to be brought down the river from the region of the Bluestone River (Ex. 36, R. 2366), "the mouth of Bluestone River being 4½ miles above Hinton" (Ex. 36, R. 2365).

Another factor limiting use was the physiography of the river. Two serious obstacles were Bull Falls and War Ford Shoals. Both occurred in the eleventh mile above Hinton, the current in Bull Falls being 7 miles per hour and the gradient for a river distance of 300 feet at that place being 47 feet per mile[1] (Ex. R. 2367).

Again, in that 24-mile reach above Hinton there is no section which even remotely approaches the steepness of slope of the 2.7 mile section between Big Walker Mountain Falls and the upper end of Sifford Falls, which section likewise is in the Virginia portion of that 60-mile gap and where for a distance of 2.7 miles the slope averages 13 feet per mile.

---

[1] As important as was the obstacle of Bull Falls, the gradient there, of course, is not as great as that for certain stretches of like distance in the middle section. For example at Barnett's Falls we find a 300-foot stretch with a slope of approximately 117 feet per mile (*Ex. 558-G*).

War Ford Shoals, 2200 feet in length (Ex. 36; R. 2367), had a fall of 15 feet per mile (Ex. 36; R. 2367). The cumulative effect of Bull Falls and War Ford Shoals was to cause use of the river through or over these barriers to be so difficult and impractical that few ventured beyond them even after the federal work had been done and while the resulting channels were still open. Consequently the bulk of the traffic extended no further upstream than Bull Falls, if indeed its upper terminus was not substantially short of this. True, some sparse use was made of the river further upstream after work had been done on various ledges, and in particular after work had been done at McDaniels (Harvey's) Falls 17¾ miles above Hinton, where the gradient over a distance of 660 feet was 25 feet to the mile (Ex. 38, R. 2390), and at Anderson's Falls, where the gradient over a river distance of 300 feet was 35 feet per mile (Ex. 38, R. 2390).

However, even after the federal improvements, local use above Hinton beyond the more favorable portion terminating at the foot of Bull Falls (in which portion such use chiefly occurred) was so difficult that it rapidly thinned out and any practical use gradually disappeared. While occasional trips may have been made as far up as Round Bottom, it is clear that they were comparatively rare and difficult. Thus petitioner's witness Wauhop testified that the highest upstream he had ever cut staves (timber products being the principal thing moved on New River immediately above Hinton) was Island Creek (some miles below Round Bottom), whence he found it impracticable to boat them down to Hinton (R. 461). Any evidence of trips farther upstream is, not only vague and inconclusive, but it shows that such trips, if they occurred, were occasional and unusual and accomplished at a period of temporary highwater when some peculiarly favorable "tide" happened to occur.

The river improvement work was a novelty. Undoubtedly it stimulated interest. Presumably there were a few who were determined as a matter of local or personal pride

to get their boats up the river in one way or another for the purpose among others of showing that the improvement would be used if it were continued and of adding weight to appeals to Congress for more local expenditures on the river. (Similar, for example, to McWane's endeavor in respect of the stretch above Radford. McWane R. 1659; Ex. 547; R. 2807 et seq.) Undoubtedly there were a few who took particular pride in being able to do anything that was regarded as a feat of dexterity and strength.

It is probable that some of these persons may, but only on rare occasions, have ventured above Round Bottom. However, any evidence concerning trips above Round Bottom is of such a character as to leave doubt whether they in fact occurred and at most shows that, if they did occur, they were unusual and rare and in the main were the result of taking a precarious advantage of some temporary "tide". Indeed this is confirmed by the physical characteristics of the stream above Round Bottom.

In order to proceed upstream from Round Bottom, if only for the next few miles, there were involved even further difficulties. Thus, at once they were faced with King's Ripple covering a river distance of 100 feet with a gradient of 10 feet to the mile (computed from table, Ex. 38, R. 2390); Pennington's Ledge covering a river distance of 60 feet with a fall of 30 feet to the mile (*id.*); Pennington Shoal covering a river distance of 1900 feet with a fall of 13½ feet per mile (*id.*); Kidwell's Ripple covering a river distance of 170 feet with a gradient of about 17 feet per mile (computed from table, Ex. 39, R. 2402); and then Wiley's Falls, with a rise of 4 feet in a distance of only 10 feet (Ex. 31, R. 2236). And, even though federal work reduced this tremendous gradient at Wiley's Falls to one of 35 feet per mile over a river distance of 495 feet (computed from table, Ex. 39, R. 2402), it nevertheless remained a most important obstruction in a series of river obstacles. Moreover, this was the upstream limit of that portion of the Lower or Greenbrier Division within which the federal work was completed.

After the close of the season of 1882 (when the last work was done on this section of the river) no effort was made to do, or to cause to be done, any further work on the ledges or shoals above Wiley's Falls (where the line between West Virginia and Virginia crosses the river). But, of course, those ledges and shoals remained as real obstacles. Immediately there was Wiley's Shoals, covering a river distance of 465 feet with a fall of 17 feet per mile (*id.*), and only a mile or so beyond, not to mention intervening ledges and shoals, was Shumate's (Neilley's) Falls where there was a rise of 11 feet, 6 of it nearly vertical (Ex. 31, R. 2286).

Another factor which the trial court undoubtedly had in mind was that even such work as was done was *not of a permanent* character, for there is embodied in its opinion the statement of Capt. Cuyler that "to effect a *permanent* improvement" it would be necessary "to adopt a more general and radical method" of improvement (R. 117). Cuyler further stated that improvement work, similar to slack-watering (Ex. 35, R. 2341), was necessary for the purpose of making the improvement *permanent* in character even for bateau navigation and rafting (R. 2340). He also stated—the obvious—that it would be necessary to provide funds for annual maintenance and repair (Ex. 35, R. 2336). Of course the permanent type of improvement was never adopted, nor were funds provided for the necessary annual maintenance and repair.

Indeed all of the reports of the Corps of Engineers, as well as all the other evidence, make clear that the federal work in this stretch, as elsewhere, was not of a permanent character and that such use, or susceptibility of use, as was made possible by these temporary artificial improvements was likewise not permanent in character.

Thus, the Board of Engineers for Rivers and Harbors reported December 23, 1912, "in regard to the reach between Glen Lyn and Hinton", that "the great fall in the river would preclude any form of continuous navigation except through slack watering the stream at prohibitive

cost" (Ex. 46, R. 2420). Of course a slack-watering system would, in contrast with the character of 'improvement' actually made, be permanent.

Indeed the filling of channels by reason of freshets began in the second season of work (Ex. 37, R. 2374); remedial work to clear and maintain channels was done throughout the very period of the 'improvement' (Ex. 37, R. 2374; Ex. 38, R. 2385; Ex. 36, R. 2367; Ex. 37, R. 2372).[1] Subsequent reports of Army Engineers referred to the deteriorated condition of the channels (Ex. 46, R. 2423; Ex. 572, R. 2851).[2] Content same as Ex. 97, R. 2531. Under the stimulus afforded by and the novelty of federal improvement work there was an increase, beginning with the federal work in 1878, until in 1880 there were 8 keel-boats on the reach above Hinton (Ex. 37, R. 2370) and in 1883 there were 17 in that reach (Ex. 39, R. 2399).

However, as petitioner has conceded, "After 1883, navigation on New River was *definitely* on the decline."[3] (App. Supp. Br. in C. C. A. 202.) Thus it is clear that the five-year period 1878-1883 not only ushered in but also ushered out the golden age of New River boating.

The facts that the use was concentrated near Hinton and had practically thinned out to the vanishing point at Round Bottom; that the federal 'improvement' was not of a permanent character and deteriorated, causing both the use and susceptibility of use to be short-lived; and that the opinion of the trial court nowhere states that the 23 or 24-mile reach above Hinton was "navigable" throughout, combine to establish, so we think, that the fair construction of the

---

[1] Congressman Peter Otey in 1901 sought (vainly) an appropriation to clean out the channels which the Government had made (Ex. 547, R. 2807).

[2] Even petitioner's witness Johnston conceded, that in order to use the river, the channels would have to be cleaned out (R. 1345-6).

[3] While not material at this point, the reasons assigned by petitioner for this decline are elsewhere shown to be fallacious (See p. 135 et seq.).

opinion is that it was not intended to hold even the 23 or 24-mile reach above Hinton to be navigable-in-fact.

Indeed, as concerns its claim of navigability of New River, not merely over the 23 or 24-mile reach within which the lower courts found that some sort of use had been made, but even as far as points in Virginia variously fixed by it at Glen Lyn and Allisonia, petitioner has heretofore found it necessary to caution that "This is not a fanciful suggestion" (App. Supp. Br. in C. C. A. 137). However, the fancifulness of the suggestion and the reason for the apology in respect thereof are apparent when one considers that at the present petitioner's War Department, the guardian of navigable waters, is about to construct[1] its Bluestone Dam, which will be located about 3 miles above Hinton; which, being without any navigation facilities, will interpose a 150-foot high barrier in the very heart of the short 'navigable' reach above Hinton. Indeed "the government's Bluestone Dam will destroy any possibility of navigation from Glen Lyn to Hinton" (107 F. (2d) 769, 790; R. 2909).

The fancifulness becomes the more apparent by reason of the fact that, when petitioner's agency, the Federal Power Commission, inserted certain conditions regarding regulation of flow in its tendered license (Ex. 131, Art. 15, R. 2670), it provided for the prevention of "undue interference with navigation on the Kanawha River" but included *not a word for the protection of the 'navigable' New River.*

(8) *Inaccurate nature of petitioner's tabulation and diagram of alleged uses.*

Inasmuch as the findings of the Trial Court are abundantly supported by substantial evidence and were concurred in by the Court of Appeals, respondent does not deem it worthwhile to trespass upon the time of this Court by engaging in any prolonged discussion of the minutiae

[1] Condemnation proceedings for the acquisition of lands for the Bluestone Reservoir Project have been instituted by petitioner.

petitioner has purported to set forth in its tabulation (Pet. Br. 178 *et seq.*) and diagram (Pet. Br. opp. 48). However, respondent does desire to invite the court's attention to illustrative instances of the glaring discrepancies between the diagram and tabulation and the actual testimony of the witnesses themselves and also to some of the patent inaccuracies in the tabulation and diagram.

In some instances the distances indicated on the diagram are inaccurate, then too various points are incorrectly located; for example, Parrot is located 2 miles *above* Cowan's Mill and it should be placed 4½ miles *below* Cowan's Mill. Again Sulphur Springs Branch is shown 3 miles further upstream than its true location (Ex. 545, R. 2806-A).

Moreover, there have been diagrammed numerous trips (usually unjustifiably prolonged in the depiction thereof) which in actuality represent merely the admitted local experimental traffic above Radford or local lumber traffic for a short distance above Hinton (*4ºA*[1], *48A, 42A, 31B, 24A, 5B*).

Furthermore, much of the testimony purported to be reflected on the diagram is inconsistent within itself and contradicted by the testimony of other witnesses. Despite the fact that the testimony of Medley[2] (the witness who didn't have time to keep count of nothing R. 384) was contradicted partially by the dates he gives and partially by petitioner's witnesses Peters and J. R. Smith[2] in so many instances as

---

[1] This reference and similar references hereafter appearing in this brief are to the lines, indicating movement by water, of petitioner's chart of 'commercial navigation', or to respondent's revised chart entitled "Alleged Commercial Navigation", etc., as the text may indicate, each of which lines of the former petitioner has designated by numeral and letter, e. g., 6D, 33D, 47J. Respondent has used the same designations on its revision (of petitioner's chart) inserted opposite page 134 hereof.

[2] Some idea of the weight (or lack of weight) to be attributed to the testimony of witnesses such as Medley and J. R. Smith may be gathered from scanning portions of their cross examination.

The following excerpts show the response of Medley when questioned about the alleged Crocket venture:

(*Footnote continued on next page*)

to deprive it of probative value, petitioner (apparently in an effort to fill up its diagram) has seen fit to show ten lines with reference to his testimony! Indeed two of the ten lines (*47I* and *47J*) refer to the same alleged trip (R. 382, 383).

"Q. How long did it take you to get to Radford, Uncle Andy? A. I told you we didn't keep count of it, mister.

Q. Was it a week? A. I couldn't tell you. I said we didn't keep count of it.

Q. Can't you tell things you don't keep any account of? A. I could tell you a lot of things I kept account of, but I ain't going to do it."

* * * * * *

"Q. Where were these eddies, do you remember any of them? A. No, after we left Glen Lyn we didn't keep count of nothing, didn't have time to keep count of nothing.

Q. You didn't see any railroad bridges? A. How in the name of the Lord could we keep an account of that and go down there and shove like dogs, how could we count the bridges and things? Mister, we couldn't have done it.

Q. I thought you might have peeped up on some occasion and caught a glance of some of them, but you didn't have time to do that? A. No, sir.

Q. Did you see anything going up that river you remember? A. Geese and ducks and birds and things like that and skiffs.

Q. Did you see Walker's Creek? A. I never paid no attention to Walker's Creek or John's Creek, either." (R. 383-4).

J. R. Smith responded in similar vein when he was cross examined with reference to this matter:

"Q. Jim, I asked you what year it was? A. I wouldn't tell you that because I don't know what year it was because I didn't pay that much attention to it.

Q. Will you tell me within ten years of it? A. I am telling you the way we worked it and I wasn't paying no attention to the years.

Q. And you don't remember whether you were working for Squire Peters or—— A. I told you I run with Squire Peters and I run with Mr. Bal Shumate and Mr. Joe Meadows.

Q. I want to find out for whom you were working at the time you were on the boat to move Col. Crockett from Crump's Bottom? A. Squire Peters was the man that had the boat.

(*Footnote continued on next page*)

Line *1A* of the tabulation purports to represent a trip from Eggleston to True and is based upon the questionable testimony of a witness who indicated that, when he was a child he, his mother and father and his brothers and sisters had made this trip with all household furnishings (R. 458-9) at night on a bateau propelled by two negroes. Indicative of the value of this testimony is the fact that this witness had first testified that this trip occurred in 1870 (R. 458)—*which means that it would have taken place one year prior to his birth* (R. 458, 460). Also it is remarkable, to say the least, that there should have been undertaken *at night* a trip which involved negotiating the falls of the Narrows, Shumate's Falls, Wiley's Falls, McDaniel's Falls and Bulls Falls.

Based on the fantastic tale of its witness Collins, who stated *inter alia* that the bateaux which carried iron from Mack Creek to New River Bridge would then continue on downstream to Hinton before returning to the furnace (R. 222-3, 218-9), petitioner has placed on its diagram a total of seven lines (*3A-3G*)! The utter absurdity of this testimony may be measured by the statement of Collins that all of the falls of New River between Radford and Hinton (including, of course, those in the section of nearly 60 miles within which no improvement was attempted) had wing walls, and channels and sluices through them! (R. 220-1)

Q. Jim, do you remember the Spanish American War? A. I know it was going on but you needn't ask me about what year but I ain't going to tell you because I never paid no attention to it.

Q. I am not going to ask you what year it was. A. I wasn't in it.

Q. Was that the time you moved Col. Crockett? A. I don't know. I couldn't tell you that. I never paid any attention whether it was before or whether it was after. If you will pay attention to me, I am a man that don't lie and I try to tell the truth and when I tell anything once I mean just what I said. I aim to tell the truth. I live that way around my home. I have got plenty of witnesses and things around my home. I try to tell the truth." (R. 361-2)

Line *27C* is based upon nothing more substantial than the testimony of an 81-year old witness (R. 261) that his father boated sugar, molasses and *coffee* from Hinton to Eggleston some five years before there was a Hinton (R. 263-6) and even before there was a railroad in that vicinity (R. 1674-5).

Line *55A* is based on the testimony of the witness E. M. Smith, who claimed to have boated merchandise from Hinton to Glen Lyn around 1906 (R. 398, 399). It is unlikely in any event that he would have boated merchandise upstream to Glen Lyn at that time—more than 20 years after the Norfolk & Western R. R. had reached Glen Lyn; this would have involved carrying his 'cargo' from one town served by a railroad upstream to another town served by a railroad. But his own testimony, that the channel went as far up as he had ever been, proves that he never went to Glen Lyn (R. 400, Ex. 46, 2418, 2423, 514).

Line *61A* purports to represent boating from Round Bottom to Hinton. It is based on the testimony of Wauhop, who actually stated that he had had about 5,000 barrel staves boated down from Island Creek (R. 461-6) some miles below Round Bottom. And this was accomplished with so much difficulty that he never again cut staves so high upstream.

For additional inaccuracies and discrepancies in petitioner's diagram, see Respondent's Brief, pp. 49-52. The attention of the Court is called to the fact that the items pointed out above, as representng diagramming without warrant, involve no duplication of the items correspondingly set forth in Respondent's Brief. Moreover, in bringing these items to the attention of the court, respondent has by no means exhausted the list of those which might properly be included with the foregoing if space permitted.

For instance, in making the diagram no account was taken of the bearing of the witness, his credibiilty or his responsiveness to suggestion. Even a witness who addressed dignified government counsel familiarly as

"Honey", and who was wont to dissipate his *ennui* by going to the river brink to observe a modern Pan upon a raft, pouring out his soul through a reed, merited two lines on petitioner's chart (*31A-31B*, R. 239).

Respondent has prepared the accompanying revision of petitioner's chart. To some extent it exhibits in brief compass other criticisms to which petitioner's chart is subject. The residuum of lines shown thereon is by no means conceded to be correct or supported by substantial evidence. In fact, it is submitted that the Trial Court could not have found that there was substantial evidence of even as much movement as is indicated on respondent's revision. In this residuum there are numerous repetitions, as for instance, where a witness, who answered a question generally, by saying that he had seen boats on the river, and who had then specified the instances, is given a line for his general statement and in addition lines for each of the alleged specific instances. (E. g., *47* J. A. Medley, Pet. Append. 182-3 and *56* Smith, J. R., Pet. Append. 183-4).

Noticeable on the respondent's revised chart is the striking extent to which the range of alleged use agrees with the length of stream which had been somewhat improved. Significant, too, the limited amount of alleged use prior to such attempted improvement.

In connection with this diagram respondent also calls the attention of the Court to the fact that, whereas petitioner upon its diagram and elsewhere shows the State line between Virginia and West Virginia as though it were located at Round Bottom Branch or Creek at the upper end of Round Bottom, respondent has placed it at its correct position at Wiley's Falls, a position substantiated even by Judge Parker in his dissent (R. 2938).

(b) The reports of the Army Engineers show that the work on the river was discontinued, not on account of the opening of the railroad nor on account of the exhaustion of natural resources but, because the cost was greatly exceeding the estimates made by the Army Engineers.

Petitioner has heretofore stated that the reports of the Chief of Engineers for 1882 and 1883 show

> "that a *continuous* project was in contemplation *even up to the time* that the work was *actually terminated*" (App. Supp. Br. C. C. A. 81).

and that

> "After 1883, navigation on New River was definitely on the decline. One of the reasons has already been mentioned, namely, the construction of the railroads. * * * also * * * because of the fact that the *natural resources*, like *minerals, coal*, and *timber* * * * became *almost entirely exhausted*" (App. Supp. Br. 202-203).

and that

> "cessation of improvements * * * was coincident with the construction of paralleling railroads" (App. Br. 33).

In its present brief petitioner reiterates (Pet. Br. 37-38) that the decline was due to railroad construction.

With respect to petitioner's assertions, several observations are pertinent:

First: The very Engineers' reports cited by petitioner, specifically state, optimistically, that

> "It is probable that when the river is fully improved boats will transport one-third of the *products* of the *fine agricultural country* through which it flows and seven-eighths of those of the *mines*, exclusive of coal." (Ex. 38, R. 2384; Ex. 39, R. 2396)

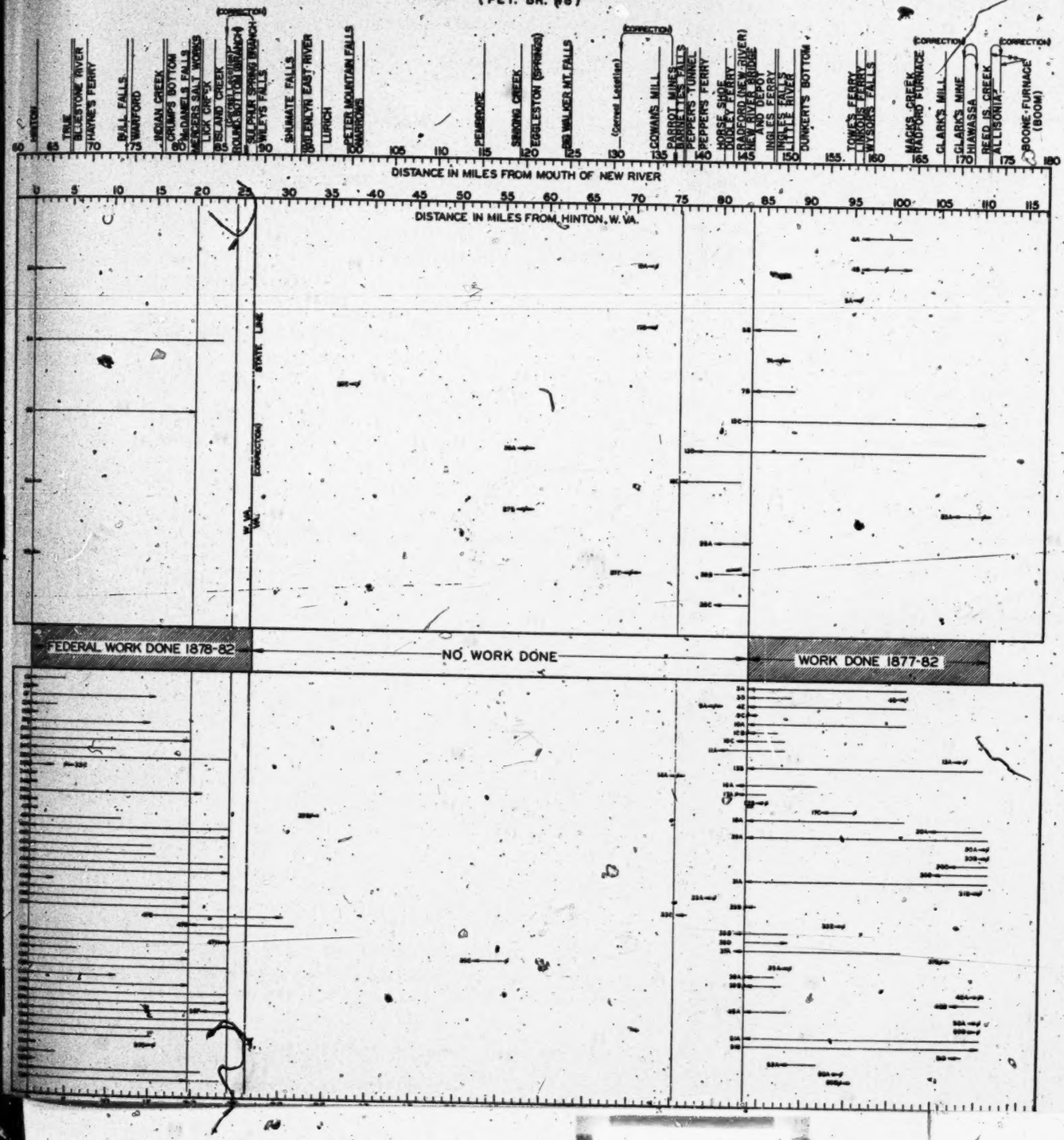
thus in themselves containing refutation of petitioner's assertion that the discontinuance of Federal work was due to the fact that the *natural resources* were "almost entirely exhausted". Actually, of course, the natural resources remained in abundance (see also 50-3, 57-60 *supra*), for this very report of the Chief of Engineers of 1883 refers to the charcoal furnaces, forges, zinc mines and lead mines, and further states that

> "many deposits of copper await shipment by the river, and vast forests of the most valuable timber,

UNITED STATES
V
APPALACHIAN ELECTRIC POWER CO.
NO. 12. OCTOBER TERM, 1940,
U. S. SUPREME COURT

RESPONDENT'S REVISION* OF PETITIONER'S CHART RE ALLEGED COMMERCIAL NAVIGATION ON NEW RIVER BETWEEN HINTON, WEST VIRGINIA AND ALLISONIA, VIRGINIA

(PET. BR. 68)



LEGEND:

← = "Line" representing a boat or raft or logs alleged to have been seen at a given place, going in or coming from the indicated direction, but with distance of movement indefinite.

→ = Alleged movement between given points.

←→ = Alleged direction of movement.

4A, 49B, etc. refer to tabulation in Petitioner's Appendix "B".

* **NOTE A:** As compared with Petitioner's chart, lines for which Petitioner's purported bases fall within one or more of the following categories have been appropriately eliminated, shortened or relocated†:

- I Incorrect use of testimony as actually recorded
- II Duplication
- III "Hearsay"
- IV Non-commercial items
- V Items based on testimony lacking probative value—
  - (a) Testimony inconsistent with other evidence in the case.
  - (b) Testimony inconsistent with well-known facts.

* **NOTE B:** Certain lines, because they refer to the period after the beginning of federal improvement, have been transferred from the upper to the lower portion of the chart†.

† For numerical identification of the lines in point and pertinent citations to the record, see reverse hereof.

THE LINES ON THIS CHART CAN NOT BE ACCEPTED AS ESTABLISHING THE OCCURRENCE OF ALL OF THESE ALLEGED MOVEMENTS OF BOATS, RAFTS OR LOGS, OR THEIR WEIGHT AND SIGNIFICANCE IF THEY DID OCCUR. THE LINES NECESSARILY FAIL TO REFLECT MANY FACTORS, SUCH AS CREDIBILITY, OCCURRENCES AT HIGH WATER, DIFFICULTIES ENCOUNTERED, ETC., WHICH WOULD JUSTIFY OR REQUIRE THE REJECTION OR DISREGARD OF SUCH TESTIMONY BY A TRIAL COURT. (SEE TEXT, ADJACENT PAGE)

Tightly Bound

on the upper division, are kept from market by the non-completion of this work" (Ex. 39, R. 2400-1).

Second: The New River Division of the Norfolk & Western Railroad was not constructed suddenly or over-night; instead, its construction had been known of and had been going on for a period of approximately two years before it was placed in operation (May 21, 1883). Consequently, if petitioner's thesis that the railroads took the business away from the river and thereby caused a discontinuance of the Federal work were sound, then there would have been no basis for a continuation, right up to the time that the Federal work "actually terminated", of the expectation that a continuous navigation project would be created. On the other hand, if petitioner should contend that the matter of whether or not the railroad would take the business away from the river could not be anticipated but could only be learned after the railroad had been placed in operation, then the commencement of railroad service on May 21, 1883, could not have been the reason for Congress's discontinuance of appropriations for improvement work, on the pertinent division of the river, prior to the time that railroad service commenced. Yet the fact is that the last appropriation by Congress for improvement work on the pertinent division of the river was on August 2nd, 1882 (Ex. 39, R. 2396).

Third: Irrespective of what others may have contemplated, there certainly is no evidence that Congress contemplated a continuous navigation project "*even up to the time* that the work was actually terminated". Moreover, it appears that the Chief of Engineers clearly entertained doubt that the work would be continued, for his report for 1883 expresses no intention of continuing the work. Instead, he merely states:

> "*Should work be resumed*, it will be found difficult to collect and organize as efficient a force * * *" (Ex. 39, R. 2396).

theless less than one-third of the river had been "improved", and even then a portion only of the work on the "improved" parts had been carried to project widths, viz., more than one-half of the work done on the middle division was a 10-foot width, instead of 30 feet as called for by the plans, and all of the work done on the upper division was of a 20-foot width, instead of the 30 feet called for in the plans. Moreover, the project depths had not been attained (see pages 80-83, *supra*).

Another consideration was that the original project channel widths on certain reaches of the river (which were factors bearing on the amount of the original cost estimates) were insufficient. On this subject the report of the Chief of Engineers (1881)

> "With a channel, as now proposed, 20 feet wide and 2 feet deep, the estimate of $181,000. would be sufficient to complete it, but as that portion from Hinton to New River Bridge has to be made 50 feet wide, at a cost of about $2,000. per mile, the above amount should be increased to $275,000., and if it becomes absolutely necessary to use locks and dams for the improvement of some of the falls, this estimate will have to be further increased by the amount of their cost" (Ex. 37, R. 2371).

While the cost of these locks and dams had not been taken into consideration in the original cost[1] estimates,

---

[1] The significance of the Report of the Board of Engineers for Rivers and Harbors stating

> "Physical conditions are such that it (New River) could not be improved for useful navigation except at *prohibitive* cost" (Ex. 46, R. 2420)

is more fully appreciated when it is realized that these early estimates of cost were predicated upon very low labor costs viz.:

> "Price of labor, 10¢ per hour up to the middle of September, when it was increased to 12½¢ per hour" (Report of C. of E. 1882, Ex. 38, R. 2388)

particularly low not only because of the hard labor involved in rock and stone excavation work, but for the additional reason that the men had to stand in the water while doing the work (Ex. 35, R. 2345).

The implication contained in the foregoing quoted portions of petitioner's brief below, that the building of railroads caused a discontinuance of improvements, likewise disregards the well-known fact that improvement work on practical waterways continues even today.

The real reason for the discontinuance of the improvement was that after the experience gained by a few seasons of actual work on the river, both the War Department and Congress had abandoned any intention of making a continuous waterway of this stream. For one thing, the cost was greatly exceeding the original estimates. Thus, after $102,000. of the total estimated cost of $215,000.[1] had been appropriated and spent in the "improvement" of a total of 191 miles, it was apparent (particularly in view of the fact that the work had been limited to the most easily improved places[2]) that the project could not be kept within any reasonable bounds in so far as the cost aspect alone was concerned; that, although approximately one-half of the money, estimated as necessary, had been spent, never-

---

[1] "The plan of improvement adopted for the whole river was that which would cost the least, $215,000., and called for a navigation of 2 feet at low water" (Ex. 528, R. 2756).

[2] Petitioner has implied that the work was done only in the difficult places, stating that the reason that no improvement work was done on the "60 mile stretch from Radford downstream was because it wasn't necessary" (Pl. (Pet.) Br. on Motion to Strike Answer, p. 151). Any contention that these attempted local improvements were undertaken in the sections of the river most unfavorable to navigation is shown to be without foundation by a multitude of facts established in the evidence.

The facts on this point were accurately stated by General Taylor, Chief of Engineers, as follows:

> "Of the 190 miles of river embraced in the adopted projects, work was carried on only on about 60 miles, and this 60 miles was divided into 3 widely separated stretches with long unnavigable reaches between them. Work was *limited* to the *most easily improved places* and effort made to so ameliorate conditions as to permit local navigation. The results were not satisfactory or important and Congress discontinued appropriations after 1886, less than one-third of the funds required for any effective improvement having been provided" (Ex. 97 and *572*, R. 2531).

dence the increase in water borne commerce which the dissenting judge, in accordance with the assertion in petitioner's brief in the C. C. A., infers from it (R. 2931). For example, the dissenting judge quotes (R. 2932) from a report by William Proctor Smith which appears in the report of the Chief of Engineers for 1883, as follows:

> "Of the freight sent from Hinton in 1882, 95 per cent. came from New River, an increase over 1881 of 46 per cent.
>
> Of the freight received at Hinton in 1882, 43 per cent. went up the river; 24½ per cent. increase on shipments from Hinton in 1882 over 1881; 9 per cent. increase on freight received at Hinton in 1882 over 1881 (R. 2396)."

An analysis of that report reveals that the quoted statement was based on the table appended to Smith's report. That table is captioned as follows:

> "Statement of tonnage sent from and received at Hinton and Lowell stations, on the Chesapeake & Ohio Railway from January 1, 1882 to January 1, 1883—furnished by Robert H. Fisher, Auditor" (evidently auditor of the railway company) (R. 2403-4).

It purports to show not only that of the 12,532 tons of freight *sent* from or *received* at the Chesapeake & Ohio Station at Hinton, 9,953 tons was river traffic, but that of the total of 10,957 tons sent from both the Hinton and Lowell stations on the Chesapeake & Ohio Railway, 8,544 tons came "from New River". If in that particular table Hinton alone had been mentioned, the table might reasonably imply that certain tonnage had reached Hinton *via New River*. However, the inclusion of Lowell in the tabulation proves conclusively otherwise, because Lowell is located 18 miles up the Greenbrier River easterly from Hinton, and New River. Obviously, any material which

nevertheless the need for them was felt, Capt. Cuyler having reported that "the dimensions of the river and of the main falls will necessitate the construction, at these latter, of locks and dams;" (Ex. 35, R. 2341).

Hence it is not surprising to find that "Congress adjourned March 3, 1883, without making provision for further work, * * *" (Report of C. of E. 1883, Ex. 39, R. 2395). Thus, it would seem reasonably clear that the discontinuance of the work to which petitioner refers was not caused by the beginning of operation on May 21, 1883 of the New River Division of the Norfolk & Western Railroad nor to the exhaustion of the natural resources but by the realization that the physical characteristics of the river were such that it could not be improved for ordinary navigation except at *"prohibitive cost"*.

(c) The Army Engineers' reports, fairly analyzed, show that petitioner has exaggerated the extent of water borne commerce during the period of the federal work.

While it is not thought to be of consequence, we nevertheless note that petitioner cites reports of the Army Engineers to substantiate its claims respecting water borne commerce during the period of the federal work (Pet. Br., 37). For example, petitioner states:

> "In the same year (1882) of the 12,532 tons of freight sent from or received at the Chesapeake & Ohio Railway at Hinton, 9,953 tons was river traffic (R. 2400)"[1] (Pet. Br., 37).

While it would be surprising if the Government work had not stimulated at least some interest in any possibilities of using New River, nevertheless it is submitted that the Army Engineers' report, viz. that of 1883, cited by petitioner, when fairly analyzed and appraised, fails to evi-

---

[1] The record citation, viz.: R. 2400 is an error. The pertinent record citation should be R. 2403-4.

Moreover, considering the primary point as to the origin of the tonnage in question, it will be observed that the report of the Chief of Engineers for 1881 (Ex. 37, R. 2370) carries its own refutation of the interpretation that petitioner has placed on the pertinent passages from the reports of the Engineers (that these statements refer merely to tonnage reaching Hinton via New River itself). In the report of 1881 (Ex. 37, R. 2377), Smith states:

Commodities	*Total tonnage sent from Lowell*		*Portion coming "from New River"*		
Bacon	3.85	tons	.96	tons	exactly ¼
Butter	1.19	"	.40	"	" ⅓
Cattle	1528.22	"	1017.72	"	" ⅔
Eggs	1.05	"	.26	"	" ¼
Horses	11.25	"	5.62	"	" ½
Sheep	64.08	"	42.72	"	" ⅔
Wool	7.38	"	1.85	"	" ¼
Dried Fruit	11.05	"	5.52	"	" ½
Rye	1.63	"	1.08	"	" ⅔
Wheat	56.92	"	37.94	"	" ⅔
Flaxseed	.47	"	.23	"	" ½
Leaf Tobacco	115.83	"	77.22	"	" ⅔
Sundries, Merchandise	32.14	"	16.07	"	" ½
Sundries, Miscellaneous	47.46	"	23.73	"	" ½

Similarly, there was guessing with respect to the proportion of commodities sent from Hinton which had come "from New River."

Commodities	*Total tonnage sent from Hinton*		*Portion coming "from New River"*		
Butter	4.04	tons	1.01	tons	exactly ¼
Eggs	.61	"	.20	"	" ⅓
Lard	1.58	"	.54	"	" ⅓
Oats	6.01	"	4.00	"	" ⅔

However, even these estimates or guesses in several instances run counter to well-known rural customs; for example, horses and cattle were customarily driven to market before the introduction of trucks. Smith himself states this

> "Horses, stock cattle, and sheep are raised in very considerable quantities, but of course *they* are *driven to market* and *do not affect the water route.*" (Report of C. of E. 1887, Ex. 560, R. 2829).

might have been transported *on New River* to *Hinton* would have been transferred to the railroad at Hinton and *would not have been transported up the Greenbrier River 18 miles from Hinton to Lowell,* there to be transferred to the railroad.

Similary Smith's report for 1882 (Ex. 38, R. 2389) states:

> "The tables following show that of the freight shipped from the stations on the Chesapeake & Ohio Railway, which are outlets to the river on the lower division, 70 per cent. is from New River, an increase over 1880 of 36½ per cent."

which statement is quoted by the dissenting judge (R. 2931) and appears in petitioner's brief in the court below (App. Supp. Br. 63). It is based on a table, set forth at page 917 of that Report (R. 2391), entitled:

> "Table No. 5—Statement of tonnage sent from and received at Hinton and *Lowell* Stations, Chesapeake and Ohio Railway from January 1, 1881, to January 1, 1882 (in tons of 2,000 pounds)—furnished by Robert H. Fisher, Auditor."

Thus again appears the significant fact, viz.: the inclusion in the table, not only of commodities sent "from New River" to Hinton but, also those sent "from New River" to the Lowell Railroad Station[1] which shows that petitioner has misinterpreted these reports.

---

[1] A further fact showing the untrustworthiness of the figures appearing in the table furnished by Fisher is that it is evident, in the case of many of the commodities listed as having come "from New River," that Fisher was making mere estimates or guesses. The following comparisons taken from the table (Ex. 38, R. 2391) prepared by Fisher show that, in each instance below, the portion of the total tonnage sent from Lowell which Fisher designated as having come "from New River" is an almost exact fraction of the total.

(Footnote continued on next page)

any alleged commerce on the Hinton Division was local in nature and extent, for that report states:

> "The improvement, *when it reaches* a point 35 miles above Hinton, *will give outlet* to Peterstown, Monroe County, West Virginia, a thriving place about 2½ miles from the river, at which there are three mills with a capacity of 58 barrels of flour and one hundred and twenty bushels of meal per day, three tanneries using 1500 hides per annum, three stores, one sawmill and one cabinet shop" (Ex. 39, R. 2399).

And that local nature is further emphasized from the report of the Chief of Engineers for 1882 where it is made clear that the improvement on the Hinton Division could not benefit Virginia until it was carried as far as the Narrows. That report states:

> "The work is now in Virginia, but as only a small point of that State puts in here, the work will *essentially be for the benefit of West Virginia,* as the *Counties* of *Monroe* and *Mercer* in the *latter State* will supply all of the freight, *until the improvement reaches the* Narrows, 40 miles above Hinton" (Ex. 38, R. 2385).

The improvement, of course, ended some 14 miles downstream from the Narrows.

5. *Although neither Congressional nor official action can make a river navigable, all considered action of Congress and the War Department sustains the conclusion that New River is non-navigable.*

(a) All considered action by the War Department has reflected the view and the fact that New River is non-navigable.

Petitioner concludes its discussion (Pet. Br. 42-47) of the attitude of the War Department with respect to New River by stating:

> "It will thus be seen that the War Department from 1872 through August 20, 1925, was of the opinion

> "The tables give a clear exhibit of the products shipped *from the Valley of New River* at the various railroad stations in 1880 and also the tonnage received *for the same section.*"

At the foot of the table purporting to give statistics for Hinton, Smith states:

> "This table shows that 41½ per cent. of the products shipped from and to Hinton is *from the section of New River now being improved;* 409 tons *from New River* were shipped at Lowell, a station on Greenbrier River, and 87 tons sent thereto" (Ex. 37, R. 2379).

It will be noted that, with respect to Lowell, Smith lapses into a shortcut terminology and uses the words "from New River" in lieu of the more complete phrase "from the section of New River now being improved" or "from the Valley of New River."

In the same report following the tabulation of tonnage received at nine stations on the Atlantic, Mississippi & Ohio Railway (subsequently the Norfolk & Western) during 1880, Smith states:

> "The above is all *from the 2 upper sections of New River now being improved, and it may be safely asserted* that not less than one-third of this amount *will be shipped by water as soon as the channel is made*" (Ex. 37, R. 2380).

From the foregoing it is evident that the interpretation placed by petitioner on various passages from Smith's reports is erroneous. Instead of *via New River,* the meaning was *from the valley* or *drainage area of New River.* The fact is that the tabulations embodied in the reports so cited contain no evidence that any of the tonnage in point whatsoever was actually transported *via New River.*

However, in any event, it is clear from the quotation from the Report of the Chief of Engineers for 1883 that

poses of navigation.[1] These acts were doubtless sought as in the case of the Wilson Aluminum Company's application for a permit for its dam at Kanawha Falls on the Kanawha River, i. e., "out of abundant caution" (*Ex. 123-a*, 2nd sheet); but in any event it is plain that Congress, if it acted at all, would incorporate such provision both as a natural precaution and because otherwise there would be no occasion for Congressional action. That is, if, as was the fact, the river was non-navigable, the Congressional Act would be of no effect and, if by any chance it were navigable, such a provision would be normal and proper.

The further citations (R. 2452-53) at page 44 of Petitioner's Brief are replies to inquiries, by a private individual and a member of Congress; and obviously neither is preceded by any investigation or consideration. In the case of the reply to E. W. Saunders, the very reference to (and apparently reliance on) merely an "interstate stream" (R. 2453), surely in itself an inadequate basis for federal jurisdiction, shows how superficial was the thought given the matter at the War Department.

But, what are the really pertinent facts which define the attitude of the War Department whenever the question of navigability of New River was presented for careful consideration? In the first place, there is not a single dam on New River that has been constructed or operated under a license except the small Washington Mills Dam at Fries in Grayson County, Virginia, which was apparently built under the authority of an Act of Congress approved June 4, 1900. But even in that case the plans were never approved by the Chief of Engineers and the War Department did not take action against the owner for any failure to present the plans to or have them approved by the War Department (Ex. 47, R. 2455). The dams at Buck and Byllesby have been maintained in New River by respondent for many

[1] Of course none of the acts reciting the construction of dams on New River, referred to by petitioner, contained any requirement for the construction and maintenance of navigation locks.

> that New River was navigable. After December 29, 1925, it was of the view that the river was non-navigable, because of its physical characteristics and its impression of the extent of the actual navigation during the period 1870-1900'' (Pet. Br. 47).

Petitioner's account of the attitude of the War Department is remarkable not only for the character of the material cited, but likewise with respect to the pertinent material omitted.

The citations to Hutton's report made in 1872 (Pet. Br. 42) and to the Report of the Chief of Engineers for 1878 (Ex. 34, R. 2326), the Report of 1880 (Ex. 36, R. 2360), the Report of 1881 (Ex. 37, R. 2370), the Report of 1882 (Ex. 38, R. 2384) and the Report of 1883 (Ex. 39, R. 2394), all cited in the petitioner's brief at page 43, do not contain statements that the River is a navigable water of the United States; rather, they place emphasis on efforts to make it useful. The same is true of the Report of the Chief of Engineers of the year 1881 (Ex. 37, R. 2370) cited at page 44 of petitioner's brief.

The citation to a report dated November 9, 1899 (R. 2429), is merely an answer to an inquiry of a Congressman which states that, although there is no navigation

> "it would appear that the action heretofore taken by Congress has indicated its opinion that New River is a navigable water of the United States."

It is not only apparent that the reply rests upon no investigation or consideration but also that the conclusion is based on a mistake of law, viz., that a river is navigable merely because federal expenditures have been made thereon.

Petitioner also cites (Pet. Br. 44) two special Congressional acts (R. 2441-47) for the construction of dams which provided that the owners shall be required to make any modifications that at any time may be required for pur-

> "I, therefore, report that in my opinion New River in its present condition is not a navigable stream * * *" (*Ex. 572*, same text Ex. 97 R. 2528, 2533).

Colonel (then Major) Herman's opinion, dated October 18, 1930, rendered likewise in the course of his official duties as District Engineer at Huntington, W. Va., after a detailed consideration of the facts respecting the river, is as follows:

> "16. After review of all of the facts, the District Engineer has reached the conclusion that New River, especially in the *vicinity* of the highway bridges now under construction over that stream by the Commonwealth of Virginia, Department of Highways, at *Glenlyn,* Virginia, and Jackson's Ferry, Virginia, respectively, is not susceptible of being used in its natural or ordinary condition, as a highway for commerce over which trade and travel may be conducted in the customary modes of trade and travel on water, nor does it afford in its natural and ordinary condition a channel for useful commerce. It is the District Engineer's opinion, therefore, that New River is not navigable in fact either at Jackson's Ferry or Glenlyn, or at any other point in its course" (Ex. 579-B, R. 2862).

General (at that time Lieutenant-Colonel) Spalding's opinion, dated October 24, 1930, which also was rendered, in the course of his official duties as Division Engineer, Upper Mississippi Valley Division, after a full consideration of the facts with respect to New River, is as follows:

> "I therefore concur in full with the District Engineer in his statement that 'New River is not navigable in fact either at Jackson's Ferry or Glenlyn, or at any other point in its course'" (Ex. 579-C, R. 2864).

The opinion of General Brown, rendered in the course of his official duties as Chief of Engineers of the War Department, is set forth in a letter dated November 11, 1930

years. More recently a dam has been placed in New River at Hawk's Nest by Electro-Metallurgical Co.

Instead of explaining the significant circumstances, that these dams are without federal permit or license, the petitioner has heretofore sought refuge in an unjustifiable[1] statement that respondent had notice through its predecessor in title that the federal government had asserted its jurisdiction over New River as early as the construction of the Buck and Byllesby dams in 1912.

Secondly, the facts show that in all cases where the question of the navigability of New River was squarely presented to the War Department for determination, after careful examination and consideration, the Department held the river to be non-navigable. A summarization of the several maturely considered statements and opinions is set forth below. These reports were made by distinguished engineers of the United States Army, not in the heat of advocacy or controversy, not in partisanship or bias, but in the discharge of their official duties.

These reports are not confined to conclusions or mere expressions of opinion; in nearly all instances they include a recital of numerous facts, descriptions of physical conditions and other matters which lead inevitably to the conclusion of non-navigability, and upon the basis of those facts the War Department Engineers have added their official opinions that New River is not navigable at any point in its course.

For the convenience of the Court we briefly review the reports of these Army Engineer officers, which include such distinguished engineering officers as General Taylor, General Brown, General Spalding and Colonel Herman.

The opinion of Major-General Harry Taylor, rendered December 29, 1925, in the course of his official duties as Chief of Engineers of the War Department after a careful consideration of all the facts involved, stated as follows:

---

[1] See p. 154 *infra*.

Therefore, in order to sense the real federal attitude one must not be content with statements hastily made and only briefly considered, or not considered at all, but rather one should turn to instances where there have arisen issues of real importance and ascertain what has been the ultimate attitude or disposition in the light of those issues.

In passing, let it be noted that the record in the present case contains various statements by federal officers that New River must as a matter of course be treated as a navigable water because of the federal expenditures of 1877-1889.[1] Rather we shall concern ourselves with more significant statements and actions representing the attitude of the Federal Government.

Turning now to such aspects of the record: The first expressions of federal interest in New River were in connection with the urge, indeed the need, of finding a suitable route for travel and transportation of commodities between the Eastern seaboard, particularly in the region of Virginia, and the Ohio River and other Western points. The several investigations, expeditions, reports of engineers, etc. were significant of nothing more than the strong incentive to utilize New River (they concerned New River from Little River, just above Radford, to its mouth). They did not involve any determination as to whether New River was a navigable water, excepting in so far as the outcome of all of these investigations showed that, despite the strength of the incentive, there resulted no use of New River for commercial purposes.

Next there are the investigations and the appropriations which led to the federal attempt in 1877-1889 to create navigability in certain isolated stretches of the river. Clearly these did not result from any investigation of the navigability of the river and any determination that it was navigable, let alone that it constituted a navigable

---

[1] Such a conclusion is of course invalid, *Oklahoma* v. *Texas*, 258 U. S. 574, 590.

to the Federal Power Commission. Contrary to petitioner's statement (Pet. Br., 47), General Brown did not decline to reconsider the previous opinion of the War Department, but instead stated:

> "After *a careful consideration* of the *material submitted*, I have reached the conclusion that there is no reason for changing the previous report of this office dated December 29, 1925, with respect to the navigability of New River. It is my opinion that New River is not navigable at any point in its course" (Ex. 539-B, R. 2795-6).

(b) Significance of attitude of Federal Government regarding New River.

It is, of course, true that, as a matter of law, administrative attitudes and actions are not conclusive. However, in the present case a brief review of the record of the attitude of Federal representatives in respect of New River is, we believe, of considerable interest. It shows that, up to the time of the first so-called new River case *(Appalachain Electric Power Company* v. *Smith, et al.)*, the attitude of the Federal Government was such as to warrant the States through which New River flows and the riparian owners along the river in believing and acting on the belief that New River is not subject to a Federal servitude.

Where the question arises as to whether or not there is Federal jurisdiction, the normal tendency and practice of Federal representatives and bureaus is off-hand to "play safe", that is, to state, and at least temporarily to proceed upon the assumption, that Federal jurisdiction attaches. The tendency and practice in point are particularly marked when there comes before a Federal department or officer a question as to whether or not Federal permission is needed for this or that. Federal representatives by inclination and training do not readily admit a lack of federal jurisdiction. The case of New River is not an exception.

The petition and complaint of that State gave rise to investigation, a public hearing, a report, and argument by attorneys on both sides of the controversy, in consequence of which the Chief of Engineers in a report to the Secretary of War July 13, 1911 stated:

> "There has been *no useful navigation* on New River *at any time*, and *none is possible* under existing natural conditions nor without the expenditure of vast and prohibitive sums in improvement work. While the discharge of ore washings in New River may produce conditions in Kanawha River injurious and obstructive to navigation * * *, it is probable that in most instances the effect is too remote * * *" etc. (Ex. 566, R. 2844).

Finally, in what appears to be the last official expression of considered opinion in this matter of ore-washings being emptied into New River in the vicinity of Ivanhoe, Va., the Chief of Engineers, General W. M. Black, reported to the Secretary of War May 19, 1916, that

> "The turning loose in the Kanawha [manifestly he meant the New] River, *at a point over 180 miles above the navigable portion*, of 5,000 or even 50,000 cubic yards of fine material per year cannot possibly produce any appreciable injury to navigation" (Ex. 566, R. 2847). (Bracketed material supplied.)

Thus the issue in point resulted in no action predicated upon any federal servitude in respect of New River. Indeed, such action as was taken and such opinions as were expressed were *predicated upon* the navigability of the Kanawha River, the *non-navigability of New River* and the fact that any effect of those ore-washings upon navigable capacity was limited to the navigable capacity of the Kanawha River.

During the pendency of the ore-washing controversy Congress itself had taken significant action in rescinding the authorization for the attempt to create a navigable condition in New River. This was by virtue of the Act of June

water of the United States. Instead they were either the result of the continuing incentive and need for a better means of transportation than the then extremely inferior system of roads,[1] particularly with a view to reaching railheads, or the result of the all too common efforts to obtain the expenditure of federal funds in given localities primarily for the sake of the expenditures, i. e., of "pork-barreling". Whichever the motivation may have been, the record reveals no mature consideration nor any deliberate finding upon the question as to whether New River was or became subject to a federal servitude. Reports on the progress of the work no more indicate any "finding" of navigability than do similar reports on the progress of other works depending upon the artificial creation of navigability, such as the Hennepin Canal or the Florida Ship Canal, indicate any conclusion that the routes of such purely artificial waterways were navigable waters of the United States.

Indeed, the first time that such an issue was squarely presented to the Federal Government was in connection with complaints as regards the practice of emptying ore-washings into New River from the mines in the vicinity of Ivanhoe. That controversy persisted from 1894 to 1916 (See Ex. 566, R. 2840-8). The War Department was importuned by various parties and by the State of West Virginia to take preventive action. The issue was sufficient to bring forth significant expressions of maturely considered views. Thus, the complaint of the State of West Virginia was not with regard to the effect of the ore-washings upon any alleged navigability of New River, but rather

> "That the ore washings caused solid deposits in *Kanawha River* to which New River is tributary, thus decreasing navigable depths of the channels" (Ex. 566, R. 2843).

---

[1] See pp. 50-1, 56 *supra*.

the very subject of this case, namely, by virtue of the Declaration of Intention made by respondent's predecessor in 1925. We do not pause here to do more than call attention to the pertinent and maturely considered report of the Chief of Engineers, General Harry Taylor, December 29, 1925 (*Ex. 572*, text same as Ex. 97, R. 2528-33), in which he found that New River "is not a navigable stream", and the fact that the Federal Power Commission itself on June 1, 1927 made the finding that

> "said river (New River) in the part thereof involved in said declaration is not 'navigable waters' within the definition thereof in said Act" (Ex. 574-B; R. 2852-3).

Indeed, as late as July 1, 1930, the Federal Power Commission through its Acting Chairman certified to the Attorney General of the United States the pertinent facts, including the fact that

> "New River is neither navigated nor navigable in fact" (Ex. 531, R. 2779).[1]

Even as late as April 3, 1931, the Commission left unaltered the 1927 finding of non-navigability (11th Annual Report, Federal Power Commission; Ex. 91, R. 2509-12).

In the meantime there had been made by the United States Engineer Department a careful examination of the question as to whether New River is a navigable water of the United States. This examination was made because there had arisen the question as to whether War Department authorization was necessary for highway bridges

---

[1] Counsel for petitioner, because of the devastating effect of this certification, have sought heretofore to impugn its official nature. But see the statement made by the Commission itself in its own report (10th Ann. Rep. 1930, Ex. 577, R. 2855) viz.:

> "In order that the Commission might have *reliable guidance* on the legal aspects of the question, the *advice of the Attorney General* of the United States *was requested* relative to the pending application for a development on New River * * *."

13, 1902 (32 Stat. 331). Needless to say, this action was in the very opposite direction from fastening any Federal servitude upon New River. See *Oklahoma* v. *Texas*, 258 U. S. 574, 590-591.

In 1912, as a result of one of the many requests that Congress appropriate funds for improvement of this or that river, the Board of Engineers for Rivers and Harbors reported upon the question as to whether federal funds should be appropriated for work between Hinton and Radford. The Board reported that those expressing interest in the improvement recognized "that the *great fall* in the river would preclude any form of *continuous navigation*, except through slack watering the stream", and that physical conditions were "such that *it could not be improved for useful navigation except at prohibitive cost*"[1] (R. 2420). The Board recommended against such appropriation and its recommendation was supported by the Chief of Engineers (R. 2418-9).

At about the same time, however, there arose in an important case the issue as to whether or not New River is subject to a federal servitude. We refer to the facts that the Byllesby and Buck dams of Appalachian Power Company (subsequently merged with the respondent corporation) had been constructed in 1911-1912 (R. 2026); that it was officially called to the attention of the Chief of Engineers that such dams had been built without federal supervision, and indeed without any form of federal authorization; and that no action was taken by the War Department or any other federal agency to require the obtaining of any federal authorization, let alone to abate the two dams (R. 2077-9; Ex. 47, R. 2454-5). Such status in respect of the Byllesby and Buck dams still continues.

The next issue involving any question of a federal servitude in respect of New River arose in connection with

[1] Clearly this evidences a *need* for *improvement* throughout the entire section from Radford to Hinton (although the cost thereof would be prohibitive) if useful navigation *were ever to be an accomplished fact?*

When these official reports, made after careful investigation of the facts upon issues squarely presented for definite official action, are considered, it is plain how insubstantial is the argument of the petitioner. Furthermore, in the light of such a record of Federal attitude, it is clear that New River, except for this *tour de force* in 1932, was treated by all federal agencies in connection with all important issues as being *free from any federal servitude.*

Surely it cannot now be contended with any degree of support, in reason or in fact, that, in the conduct of their affairs and the making of their investments, riparian owners and other private parties were not justified in proceeding on the belief that no federal servitude in respect of navigable capacity had attached to any part of New River.

In the light of that consideration, as well as of the record, it appears further that nothing short of a factual basis clear beyond the peradventure of a doubt (and we submit that no such basis exists) could at this late date warrant a holding that New River is subject to a federal servitude by virtue of being navigable-in-fact.

6. *Although comparison with other rivers (held navigable or non-navigable) is irrelevant in fact and law, petitioner's comparisons serve only to confirm the non-navigability of New River.*

When the navigability of a particular river is the subject of judicial inquiry, evidence of the physical characteristics and other criteria of navigability on other rivers is plainly inadmissible; and it is even clearer that a comparison of other rivers without the benefit of receiving evidence in detail upon their physical and other material characteristics is irrelevant and inadmissible. Such is the law.

> "Each determination of navigability must stand on its own facts." *United States* v. *Utah,* 283 U. S. 64, 87.

across the river at Jackson's Ferry and Glen Lyn, Virginia. The reports on this by the various Engineer Officers were as follows:

On October 18, 1930, Lieut. Colonel (then Major) Herman, as District Engineer, officially reported that in his opinion

> "*New River is not navigable in fact* either at Jackson's Ferry or Glen Lyn or at any other point in its course" (Ex. 579-B, R. 2862).

On October 24, 1930, General (then Lieut. Colonel) Spalding, as Division Engineer, stated that after a careful consideration of the facts he fully concurred in the statement of the District Engineer that New River

> "is not navigable in fact at Jackson's Ferry or Glen Lyn or at any other point in its course" (Ex. 579-C, R. 2864).

And on November 11, 1930, General Lytle Brown, as Chief of Engineers, rendered an official opinion in which he said that

> "It is my opinion that *New River is not navigable at any point of its course*" (Ex. 539-B, R. 2795-6).

Moreover, when petitioner's agency, the Federal Power Commission, inserted certain conditions regarding the regulation of flow in its license tendered May 5, 1931 (Ex. 131, Art. 15, R. 2670), it provided for the prevention of "undue interference with navigation on the Kanawha River" *but not a word with regard to the protection of the 'navigable' New River.*

It was not until Columbus Day of 1932 that the Federal Power Commission embarked upon the self-serving proposition that New River is navigable—a proposition which shows on its face that it was made in an attempt to bolster its position in the then pending suit (the first New River case):

Green River, each held navigable in the *Utah* case, yet "in general, as the spring high water has receded these sand bars have constant and fixed locations" (*id.* 85). There were occasional "crossing" sand bars, in which instances there was some difficulty in ascertaining the course of the channel, or the depth of a bar was less than that prevailing in the well-defined channel (*id.* 85). However, the slope of the 150-mile section of the Colorado:

> "is gentle, being less than 2 ft. per mile" (*id.* 80).

The Court stated that the rapids were few. "There were four drops in elevation which may be called small rapids, but it appears that these do not ordinarily make necessary any portage of boat or cargo" (*id.* 85). This slope of the Colorado, of less than 2 feet per mile compares, with an average slope of 7.1 feet per mile for New River.[1] As to depths in the Colorado, the Master found that they ranged from between 3 and 4 feet for 17 days in the year to over 8 feet for 124 days in the year (*id.* 81).

As to the Grand River, found navigable by the Master over a distance of 79½ miles, 65½ miles thereof had a gradient of "only a little over 1 ft. per mile" (*id.* 79) and the remainder had a gradient of 3.5 ft. per mile (*id.* 79). The Master found that there was a stretch of about 3 miles at the upstream end "in which there were 3 small rapids", but he held this 3 miles to be navigable along with the balance of the 79½ mile section even though in this 3-mile stretch "the river is less susceptible of practical navigation for commercial purposes than in the remainder of the river" (*id.* 79). The Master found that in the Grand River "for 349 days in the year there is a depth of 3 ft. or over" (*id.* 79).

As to the 95 mile reach of the Green River held navigable, there was a gradient of less than 1.2 feet per mile (*id.* 78) and "for 312 days in the year there was a depth of 3 ft. or over" (*id.* 78).

---

[1] This is the slope between the mouth of New River and the "mouth of Wilson" the portion of the river claimed by the Federal Power Commission to be navigable and shown on Plates I-IV.

This principle does not depend alone upon the rule which precludes the injection of collateral issues in a suit. As we have previously shown, the physical characteristics of the stream are its peculiar "hallmarks" and the effect of any particular type of obstruction can be determined only in relation to the presence or absence and the character of other types of obstructions in the same river. In no case will any particular type of obstruction be precisely the same upon any two rivers; much less will it ever happen that the existence and relation between all of the various types of obstructions to navigability is the same upon two given rivers. But, did such comparison constitute an admissible method of proving navigability or non-navigability of a river when that becomes the subject of judicial inquiry, the comparisons urged by petitioner would here serve only to confirm the fact, shown by the evidence and found by the court, that New River is non-navigable.

(a) Comparison with Colorado, Green and Grand Rivers.

On Plate I[1], at the end of this appendix, are shown the profiles of New River and those of parts of the Colorado, Green, Grand and San Juan Rivers, of which the navigability was the subject of judicial determination in *United States* v. *Utah*, supra. Even a superficial inspection of the plate shows that the slope of New River is throughout very much steeper than the slopes of those parts of the Colorado, Green and Grand Rivers, which were held navigable in the *Utah* case (those parts being indicated by hatching under the profiles).

While, as petitioner implies, there were some shifting sand bars (not rock ledges as in case of New River) on the 150-mile section of the Colorado River immediately above the Arizona-Utah line, and likewise some on the 79½-mile section of the Grand River and the 95-mile section of the

[1] All data shown on Plates I-IV are derived from the instant record or official documents. The relative scales of all plates have been made to conform to those of the Government exhibit in the *Utah* case upon which Plate I is directly based.

quently with almost limitless reaches on either side of excellent water having little or no slope. It is, of course, manifest that, if this short reach of the Fox had not lain between waters of gentle or no slope and excellent navigability over immense distances, it would not have been held to be part of a navigable waterway.

On the other hand, an inspection of the profiles of Plate II shows that the slope of New River from its mouth to the mouth of Wilson Creek is generally comparable to that of this short reach of the Fox, which, as the petitioner says in its brief, could not be passed except by portages. To suggest that, merely because a short interrupting reach in one of the greatest and most favorable waterways on the continent was held not to destroy the character of that waterway as a navigable water of the United States, a stream upon which any attempted use would involve one long portage from its mouth to its upper reaches might be considered navigable, is plainly absurd. It was, of course, the long and almost endless reaches of good water on each side of this short difficult stretch of the Fox which made portaging through that reach of the Lower Fox tolerable and practicable. Indeed, the evidence shows that from the earliest settlement of the country, up to and including the time of the Montello decision, this great waterway had been practically utilized in commercial navigation. It was then being regularly traversed by steamboats.

On the contrary, the evidence in the instant case shows that there was no use of New River by early traders, settlers or industries, even though land travel was immeasurably more difficult than in the territory through which the Fox flowed. Obviously, this was because, although it would have been practicable to endure even difficult portages for a short distance in the course of an otherwise excellent waterway thousands of miles long, such as the Great Lakes-Fox-Wisconsin-Mississippi route, it was utterly impracticable to use a stream which would have involved one continuous succession of portages between its mouth and its source and traversed a mountainous territory throughout.

As may be seen from Plate I, the portions of the Colorado, Green and Grand Rivers held to be navigable have a slope approximating that of the navigable Kanawha rather than that of any part of New River. On the other hand, the San Juan River, held in the *Utah* case to be non-navigable, obviously had a steep slope quite comparable to that of New River.

(b) Comparison with Fox River.

In its discussion of *The Montello*, 20 Wall. 430, petitioner refers particularly to a short reach of the Fox River in which there was an average fall of approximately 8 feet per mile concentrated in large part at one point and to the fact that in this short reach portages were necessary (Pet. Br. 64, 66). It would be enough to point out that the average fall of the Fox River (which was a link in the Great Lakes-Fox-Wisconsin waterway to the Mississippi River System) from its mouth to the point where it almost touches the Wisconsin River (the point of portage to the Mississippi system) is less than 1.15 feet per mile, in comparison with an average fall of 7.1 feet per mile on New River! (Report of Chief of Engineers, 1936, pp. 1182-3).

In *The Montello* case, the question was not merely whether this one short reach of the Fox, separately considered, was a navigable water, but whether the Fox River as a whole was a navigable water. It was an admiralty case, in which the question was whether a vessel which plied only between Oshkosh (far upstream from this short difficult reach) and the city of Portage on the Wisconsin River was subject to the admiralty jurisdiction of the United States (*The Montello*, 11 Wall. 411, 412).

On Plate II, at the end of this brief, there are shown profiles of New River and of the Great Lakes-Fox-Wisconsin route to the entire Mississippi River System, in which the Fox was a vital link. Mere inspection discloses that, although the slope of the relatively short difficult reach of the Fox is comparable to the slope of the entire New River, it was merely a single, concentrated interruption in a continuous waterway extending over 3300 miles and conse-

proof lies in the fact that no practical early use of New River was made despite the most compelling incentive to use any available waterway, no matter how difficult.

It is also to be remembered that this extensive use was made of this Lake Michigan-Desplaines-Illinois waterway even though it flowed through an open prairie where land travel, not only by foot and pack-train but even by ox-cart and wagon, was entirely practicable and indeed easy.

On the other hand, the evidence conclusively shows that, although the difficulties of land travel down the New and Kanawha Valleys were of the most severe character, no use whatever was made of New River. Another striking thing is that on three occasions the State of Virginia caused exploratory trips to be made in order to locate a practical route by turnpike or canal between the head of the James River and the Kanawha and Ohio Rivers. No one ever sent an exploratory expedition to make a location for the Lake Michigan-Desplaines-Illinois route. That was not necessary, because that route had been in practical use from the days of the earliest settlement of the continent.

(d) Comparison with Tennessee River.

Petitioner (Pet. Br. 67) and the dissenting judge (R. 2935) make comparison with the Tennessee River. However, what has been said with regard to the Fox (pp. 160-1 *supra*) and the Desplaines (pp. 162-3 *supra*) Rivers is generally applicable to the Tennessee.

The important obstacle in the case of the Tennessee was Big Muscle Shoals, a stretch of 14 miles having a gradient of 5.93 feet per mile. This obstacle, however, was situated in an otherwise extremely flat river, 652 miles in length, with an average gradient throughout that entire distance of only 0.79 feet per mile. Plate IV at the end of this Appendix reveals the striking contrast between the gradient of the Tennessee River and that of New River. It will be seen from the profiles that the gradient of the Tennessee River is even less than that of the navigable Kanawha.

(c) Comparison with Desplaines River.

Petitioner refers to the Desplaines River which was held navigable in *Economy Light & Power Co.* v. *United States,* 256 U. S. 113, at least at the point, about half a mile above its mouth, where the power dam in controversy was located.

We invite the Court's attention to the profiles and the comparative slopes of New River and of the Lake Michigan-Desplaines-Illinois River Waterway between the Great Lakes-St. Lawrence System and the Mississippi System, which are shown on Plate III, at the end of this Appendix. It will be noted that the *Economy* case, like *The Montello* case, dealt with a situation where a relatively short stretch of difficult water was a comparatively minor inconvenience in the use of the almost limitless reaches of fine navigation on either side—the greatest and finest inland waterways on the Continent, with a length of more than 3000 miles.

In connection with petitioner's reference to portages (Pet. Br. 66), it must be recalled that there was always a portage over the divide between the Chicago River and the Desplaines on this water route between the Great Lakes-St. Lawrence System and the Mississippi River System. Obviously, this was a case where portages in a short reach of a waterway with almost limitless reaches of good water on either side manifestly do not preclude practical use for trade and commerce.

On the other hand, if portages were required on this short reach of the Desplaines, then a mere inspection of the profiles of Plate III shows that portaging would be the continuous and ordinary condition—the rule and not the exception—throughout the entire length of New River, and not merely an occasional and relatively brief inconvenience between limitless reaches of good navigation as in the case of the Desplaines. On New River portages throughout the entire length of the stream would be the rule rather than the exception. To suggest that such a condition would permit practical use for commerce of a substantial and permanent character is manifestly absurd, and the incontestable

(3) That there is great difficulty in maintaining project depths on these streams during low water; and

(4) That, consequently, navigable capacity of these streams will be impaired (Pet. Br. 81-83).

We now examine more fully the evidence pertaining to these factual premises.

Petitioner's first premise is that during an allegedly critical low water period occurring between August 24 and August 31, 1918, New River at the damsite contributed 38% of the flow of the Ohio below the mouth of the Kanawha. This computation is based upon certain alleged estimates of flow at the damsite, at the mouth of the Kanawha and at old Dam 25 in the Ohio River, just above the mouth of the Kanawha. The Ohio River flow used by petitioner was an estimate of its witness Davenport, hazarded 18 years after the alleged flow occurred, without benefit of any flow records or measurements, under conditions which made it impossible to use the "accepted method" (R. 1439) and for a period when the Ohio River dams above the mouth of the Kanawha were under construction, so that no reliable flow estimates were possible (R. 649-53; 1436-41; 1311-3). The flow estimated by witness Davenport was 1210 c.f.s. (R. 1421). The official report of the Army Engineers on the Ohio River, dated August 14, 1935, shows that the flow of the Ohio River was lower during the fall of 1930 than it has ever been since records of this nature have been kept and that the lowest flow at Dam 25 was 2120 c.f.s., or nearly twice as great as Davenport's admittedly unreliable estimate (*Ex. 602,* being table 45 of House Doc. 306, 74th Cong., 1st Sess. (*Ex. 601,* p. 146, par. 263)). The flow figures used by petitioner for the damsite and at the mouth of the Kanawha River were similarly, not flow *measurements* (there were no gauges at, or rating curves for, either place at the time) but, merely *estimates,* in the making of which different methods and dates erroneously chosen, were used in estimating the two flows, with the result of obtaining an ab-

PART II.

Analysis of evidence relevant to issue of impairment of navigable capacity.

Any attempt adequately to review the voluminous evidence upon this subject—much of it scientific and technical in character (R. 2904, 129, 130-1)—would extend this Part II of our Appendix beyond any permissible compass, and we shall not burden the Court with such an exhaustive review. The purpose hereof is merely to provide, for the convenience of the Court, a somewhat more comprehensive analysis of certain lines of evidence on the subject in case the Court should be interested in a more detailed review of such evidence than that found in the summary in our brief.

A. Petitioner's allegedly undisputed evidence (Supplementing summary discussion in respondent's brief 71-74).

In our brief we point out that petitioner's argument, under its heading—"The undisputed evidence", rested in fact upon, not undisputed evidence but, evidence which is, not only contradicted but, shown to be grossly erroneous by the record. Petitioner's factual premises are:

(1) That, during allegedly "critical low water periods", New River at the site of respondent's dam had on one occasion, in September, 1930, contributed as much as 70% of the flow of the Kanawha River, and on another occasion, in August 1918, as much as 38% of the flow of the Ohio River just below the mouth of the Kanawha;

(2) That in the operation of respondent's project week-end (Sunday) shutdowns (only contingently possible) would cut off the flows of the above-mentioned streams, in the respective proportions, for 34 hours during such allegedly critical low water periods;

Rivers of contribution from above Radford. In addition to the evidence cited in our brief, much other evidence plainly shows the error in this hypothesis of petitioner. In this connection, it may be helpful to review the behavior of the tides or so-called "waves" (variable discharge); because the evidence on that subject makes clear why petitioner's hypothesis is greviously in error.

The back or "tail" of a so-called "wave" or any other discharge preceding an interruption of flow, lags so that the front of the following "wave" soon overtakes it, the trough between "waves" gradually becomes filled with water from the crest and the flow of the stream has a progressive trend toward uniformity (R. 837, 1860). This is a process which begins immediately below the dam, 160 miles above the head of navigation, and one which is clear and undisputed in the record. Yet, this fact is wholly ignored by petitioner.

The "tail" of a "wave" will lengthen out to a d (time of flow) of between two and three days in passing down New River (R. 1860). It is plain that the respondent's intended acts will involve at the most (and even that is only a contingent possibility) a maximum shut-down of 34 hours (Pet. Br. 78).[1] It is thus obvious that, in the case of an assumed Sunday (34 hour) shut-down, the following "wave" would overtake or overrun the tail of the preceding "wave" long before the latter had passed down New River and that, even without regard to the increase in low water flow provided by respondent's reservoir, such a shut-down would not materially reduce the natural flow of the Kanawha and the Ohio. And, when the increase in low-water flow provided by respondent's project is taken into consideration, the evidence clearly establishes that the

---

[1] Ex. 594 represented the upper limit of any variable operation of respondent's project. It affirmatively appears that the operation would be less variable during seasons of very low water. This is dictated and controlled by the essentials of practical operation (R. 2905; 2038-9; 2043-8; 1954-6; 2007-8).

normally and disproportionately larger flow at the damsite and smaller flow at the mouth of the Kanawha (R. 567-78; cf. R. 1232-3).

However, quite apart from the obvious errors in these estimates, the flows used, and the computations made, by petitioner are plainly irrelevant. Petitioner's argument is directed to an alleged possibility of impairment during allegedly "critical low water periods" (Pet. Br. 81-2). The estimated flows for the damsite and the mouth of the Kanawha (used in petitioner's computation of contribution from above the damsite to the flow of the Ohio below the mouth of the Kanawha during the allegedly critical low-water period in August 1918) are respectively 2260 s.f. and 4737 s.f. (R. 559, 1317). It is undisputed that the natural low-water flow at the damsite is 600 s.f. and at the mouth of the Kanawha is from 1,000 to 1,100 s.f. Consequently, if any such flows prevailed at the damsite or at the mouth of the Kanawha during this period, neither reflected a low-water condition but instead one of a flow unusually high for the summer season and one under which there would be far more water than needed or useful for navigation, even under petitioner's indefensible assumption of an absence of any or all contribution from above Radford.

What petitioner obviously did, in addition to taking erroneous and discredited flow figures, was to select a short period during a low-water season when there was a temporary freshet on the New and Kanawha Rivers and none on the Ohio, so as to obtain a temporarily distorted but immaterial relation between the flows of the Kanawha and the Ohio—and to call the result "evidence" of the relation between the flows "during critical low-water periods."

In our brief we have shown that a much graver and more indefensible error in petitioner's argument is the assumption, squarely refuted by the record, that, even if petitioner's flow figures were correct, the operation of respondent's project would, under conditions assumed by petitioner or otherwise, deprive the Kanawha and Ohio

discharge somewhat greater than would be possible during an extreme low water period. However, assuming for purposes of argument that the average discharge from respondent's project would have been no greater than during extreme low water periods, it is still plain that respondent's project would have produced no material effect upon the flow at the mouth of the Kanawha.

As pointed out in our brief, even during a week of extreme low flow (600 c.f.s.), the average flow below the damsite with respondent's project in continuous operation would be 1230 c.f.s. If a shutdown for 34 hours did occur in such a week of extreme low flow, utilization of the available water during the remaining 134 hours of the week (as is, of course, the purpose of a power reservoir) would result in an average flow of 1540 c.f.s. Consequently, the contribution from above the damsite to the flow at the mouth of the Kanawha would not fall below approximately 850 c.f.s., even at the brief period of maximum effectiveness of such a shutoff, and to this would have to be added approximately 400 c.f.s., being the flow of the drainage area of the Kanawha basin below the project site, affording a total flow at the mouth of the Kanawha of approximately 1250 c.f.s. Thus the flow at the mouth of the Kanawha would not be materially less than the 1297 c.f.s. natural flow at the mouth of the Kanawha as claimed by petitioner. And, even on the basis of applying the results of operation of respondent's project during such a period of low flow, the resultant flow at the mouth of the Kanawha would be substantially greater than the natural low flow at that point (1100 c.f.s., Resp. Br. 72).

It is also obvious that resulting flows would have been far larger than necessary or useful for navigation (See Resp. Br. 70), and except for the brief peak of maximum effectiveness, the flow during the period selected by petitioner would have been substantially larger than under natural conditions.

Of course, as pointed out in our brief, the matter of contribution above the damsite would be material, if ever,

effect of respondent's project during extreme low-water periods will be to increase the low-water flow of those streams as compared with the natural condition.

This may be shown, for the period selected by petitioner, by the testimony of petitioner's own witnesses. One of petitioner's witnesses claimed that, if the flow of the damsite were shut off for 57 hours (about 2½ days), such a shutoff would reach a point of maximum effectiveness of 75%, for a relatively short period only, at the mouth of the Kanawha River (R. 803-4). The Trial Court found "that the witnesses who furnished the bulk of plaintiff's testimony" on this subject were so biased and evasive that their testimony was entitled to little, if any, weight (R. 130-1); and this estimate of 75% is excessive. However, assuming *arguendo* the correctness of this estimate of petitioner's witness, it is clear upon the evidence that, had respondent's project been in operation during the 10-day period in 1930 (September 21-September 30 inclusive) when petitioner claims that New River above the damsite contributed 70% of the flow of the Kanawha River at its mouth, respondent's project would have produced no adverse effect.

It is undisputed that the effectiveness at an assumed shutoff at the damsite would be far less for 34 hours than for 57 hours. We may assume, for purposes of argument, that the effectiveness of a 34-hour shutoff (the maximum contingently possible in respondent's operations) would be directly proportional to that estimated by petitioner's witness for a 57-hour shutoff, although it would not unlikely be somewhat less. By accepting that basis for present purposes, the effectiveness of a 34-hour shutoff would reach a brief maximum of 45%, leaving a minimum residual of at least 55% of the previous flow. According to the flow figures of petitioner, the flow at the damsite during this period was, not an extremely low flow (600 c.f.s.) but, 908 c.f.s. (R. 564). Under these circumstances the normal operation during the period in question would involve an average

credited by the fact that, while seeking to support the claim by means of incompetent and uniformed witnesses, petitioner refused to call, or to permit to appear, Colonel Conklin, the U. S. District Engineer in charge of these waters.

Thus, the testimony of petitioner's witness McWhorter (Pet. Br. 81) consisted merely of simple arithmetical calculations based upon the discredited Ohio flow figures hereinbefore discussed and upon alleged temporary or instantaneous flows during early years, caused by manipulations for navigation during a period when, as the witness knew, there was an Ohio River practice (no longer existing but then indulged in because the dams on the Ohio had not been built below the mouth of the Kanawha) of holding back the water to create a tide on which to float coal-barges down that part of the river not yet improved. (R. 1309-13; 739-40.) This witness admitted that he did not know how much water was required for the operation of the dams on the Ohio or Kanawha Rivers and that he had never operated or had charge of similar dams. (R. 1313-4.) He also admitted that the dams on the Ohio above the mouth of the Kanawha require substantially the same amount of water for their operation as those below, but nevertheless insisted that the Ohio dams below the Kanawha could not be operated with 500 c. f. s. more water than would be needed or useful for the dams above the mouth of the Kanawha. (R. 1314-20.) He was one of the witnesses whose bias and evasion was the subject of a finding of the court (R. 130-1).

Douglass and Stone (whose testimony related to conditions either before any improvements were made or before the existing projects were constructed) were bargemen who were in no way qualified to testify on the subject (R. 1116, 1105-6; 1121-3). Trippe's testimony, vague and contradicted by his own report (R. 745-6, 743), related chiefly to a situation no longer existing, namely, when the old

during a period of extreme low flow; and it is there shown that the operation of respondent's project, even if a maximum shutdown of 34 hours should occur during such a period, would at all times substantially increase the natural low water flow (See Resp. Br. 72-3).

Since any effect of respondent's project upon water supply during an allegedly critical "low water period" would be beneficial, petitioner's assertion that there is great difficulty in maintaining project depths on the Kanawha and Ohio Rivers would be immaterial, were it true. However, in support of this contention, petitioner cites only the disputed, contradicted and largely discredited testimony of its own witnesses (Pet. Br. 81). The claim was completely refuted by the testimony of Dr. Mead, Colonel Scheidenhelm, and Major Putnam and the report of General Taylor, Chief of Engineers. This testimony and evidence are reviewed in respondent's brief at pages 70-1. This testimony was given by highly qualified and informed witnesses.[1] And the claim was further dis-

[1] Mead, Dr. Daniel W., Consulting Engineer with offices in New York City and Madison, Wisconsin; 50 years experience in the design, construction and supervision of operation of hydroelectric plants; consulting engineer for the Miami Conservancy District; consultant on Wilson Dam; consultant on Boulder (Dam) Canyon project; consulting engineer for Tennessee Valley Authority; member of Engineering Board for Flood Control on Huai River, China; consultant on numerous projects in Virginia and West Virginia, including Radford project; for 28 years head of Hydraulic Engineering Department, University of Wisconsin; author of first textbook on "Water Power Engineering" and other related subjects; then President of American Society of Civil Engineers (R. 1942-52).

Scheidenhelm, Col. F. W., Consulting Engineer in New York City; 30 years experience in the design, construction and supervision of operation of electric plants and systems; extensive experience in connection with hydro-electric developments in Virginia and West Virginia; consultant on the Radford project; consulting engineer to the Public Service Commission of New York on appraisal of water power sites; member of Board of Consulting Engineers on Norris Dam of Tennessee Valley Authority, served as officer in Corps of Engineers during the World War (R. 2012-6).

For qualifications of Major Putnam, see p. 173, *infra*.

the result of the test waves in 1930 with tests by integrating models, found that the maximum rate of increase at Kanawha Falls (somewhat above the head of navigation) of a "wave" corresponding to the maximum of any operations intended by respondent, would be 800 second-feet an hour and that the maximum rate of decrease would be 250 s. f. an hour (R. 1862-3, 1869). Something of the significance of this may be understood from the fact that, at low water, when petitioner insists that any effects are most important, a change in flow of 1,000 s. f. just below the London dam (the upstream dam on the Kanawha) would make a change in depth (always above and never below project depths, in a canalized river like the Kanawha) of only about 1/5 of an inch! (R. 1304; *Ex. 116*, R. 644) Indeed, the rate of change in flow provided by the Government for the operation of the power projects at the Kanawha navigation dams, is 3,000 s. f. per hour (R. 2192). In view of the foregoing the irrelevancy of petitioner's reference to alleged changes in navigable depths of 5 inches (Pet. Br. 85) is thus apparent. For that matter, "Time and again natural tides occur which substantially exceed in amplitude and in volume any of the 1930 test tides." (R. 2057)

Indeed, such changes in depths as could occur would be far less than the variation of 3/10ths of a foot which is a regular incident of the normal operations of the Kanawha navigation pools. (Ex. 263, R. 2750-2; 2193; 2206-7) In fact, variations in pool level at the foot of Marmet dam, due to the operation of the Government licensed power station, are shown to equal at least 1.3 feet (R. 1855; *Ex. 229A*, R. 2268) and on some occasions even 3 feet (R. 2207).

Major Putnam[1] testified that a rate of increase in the

---

[1] Major R. W. Putnam, officer of the Corps of Engineers from his graduation from West Point in 1913 until his resignation in 1926; as Chicago District Engineer made exhaustive study of Illinois waterway, Chicago Drainange Canal and the peak load operation of the hydraulic-electric plant at Lockport; made exten-

(*Footnote continued on next page*)

(and since displaced) dams on the Kanawha were so dilapidated and leaky that they would not hold water (R. 752-4). Of course, a dam creates a pool and changes the natural slope of a stream; and obviously, unless the dam retains water, the stream will seek its natural slope.

B. Supplementary review of certain evidence relating to the alleged effect of so-called power "waves" or tides upon navigable capacity

(Supplementing discussion in respondent's brief, pp. 74-79).

In our brief, we point out that the size and rate of any variations in flow which will exist in the Kanawha River will be determined by the operation of the Government licensed projects at the Kanawha navigation dams and not by respondent's project. However, we also point out that, quite apart from that fact, it would be physically impossible (by any manipulation of respondent's project although wholly unrelated to any intended acts of respondent) to produce any variations in flow in the Kanawha River which would impair navigable capacity there (Resp. Br. 75-78). We now review the pertinent evidence in more detail.

Professor Thomas,[1] who had supplemented his study of

[1] Prof. Harold A. Thomas, who is perhaps the greatest living authority on the irregular flow of water and the behavior of tides or "waves", has had charge of the Hydraulic Laboratory and of all courses in Hydraulics and Hydraulic Engineering at the Carnegie Institute of Technology since 1928; Consultant to the U. S. Engineers on the Bluestone Reservoir on New River; consultant for the U. S. Engineering Offices at Philadelphia, Pittsburgh, Huntington, Mobile and Panama Canal Zone; participated in studies regarding water power and flood protection for the New York State Water Supply Commission; studied the question of flood heights and movements as practical problems on the Snoqualmie, Wabash, White, Miami, Allegheny, Monongahela, upper Ohio and Delaware Rivers; is the author of technical articles and reports upon the hydraulics of flood movements; and has specialized in the study of irregular and fluctuating flows of water (particularly in rivers and other open channels) such as floods and power tides or "waves" (R. 1841-5).

Engineer in charge of such matters, and that of one or two bargemen with reference to certain alleged difficulties of navigation and groundings on the Kanawha River (Pet. Br. 85-87). Manifestly, none of the alleged difficulties of navigation on the Kanawha River could have been caused by operations of the uncompleted Radford plant. However, an analysis of the evidence shows that none of these difficulties was caused even by the operation of the power plants on the Kanawha and that, to the extent they really occurred, they were due to entirely different causes.

Nevertheless, petitioner claims that these alleged difficulties were caused by the operation of power plants in the Kanawha River (Pet. Br. 87, footnote 12). It would be enough to point out that, if such were true (as it is not), these alleged difficulties came from the operation of the federally licensed Marmet and London power plants at the Government navigation dams on the Kanawha River. Manifestly the possibility that those power plants, which discharge directly into the navigation pools, might cause interference with navigation is so much greater than in the case of a plant located 160 miles above the head of navigation as to make the testimony wholly irrelevant. Moreover, it is plain that henceforth, as at the time of the trial, the conditions in these navigation pools below the Government dams on the Kanawha River will depend upon the operation of these federally licensed power plants and not upon the operation of respondent's project.

However, the evidence makes clear that these groundings, in so far as they did occur, resulted from causes totally unrelated to the operation of power plants at the Kanawha River navigation dams. The old navigation project (adopted in 1875) on the Kanawha River was a 6-foot project. After the Government adopted a 9-foot project for the Kanawha River, it commenced the construction thereof in the upper end of the river, with the result that there was a temporary period during which this part of the Kanawha 9-foot project was separated from the existing 9-foot project in the Ohio

flow into the various navigation pools on the Kanawha not exceding 6,000 s. f. per hour and that a rate of decrease of flow into those pools not exceeding 2,000 s. f. per hour would have no effect upon navigation so long as the water supply were not reduced below the requirements for navigation (which we have shown to be impossible) or the total flow did not reach the vicinity of even as high as 22,000 to 30,000 s. f., where obstructive currents would be encountered. The latter limitation had nothing to do with the effect of the *rate* of increase or decrease of flow, but depended upon the total flow existing, independently of rates of change in flow. (R. 1787-91) Major Putnam also testified that a rise in the stage in the various navigation pools on the Kanawha River not exceeding a rate of 1½ to 2 feet per hour or a decrease in the stage at the same rate, would not adversely affect navigation on the Kanawha. (R. 1787-94). It is thus manifest that neither the volume nor the rapidity of any variations which would be produced by any manipulation whatsoever of respondent's works, much less by any intended acts of the respondent, could remotely approach the magnitude or rate of the variations which, the testimony shows, would not adversely affect navigation or which are currently provided for by the Government in the operation of its licensed projects at the Kanawha navigation dams.

C. The testimony cited by petitioner with reference to alleged difficulties of navigation on the Kanawha River is not only largely erroneous but plainly irrelevant.

Petitioner cites the testimony of certain subordinate employees of Colonel Conklin, then United States District

---

sive studies of waterways in Europe and the United States; since resignation, practiced as Consulting Engineer on river and harbor works, including 60 navigation projects scattered throughout the United States; has been actively engaged in the commercial navigation business on inland waterways, including the Great Lakes and Illinois River and the Green River in Kentucky; had examined the Kanawha River with a view of expanding his commercial navigation operations. (R. 1777-80)

More important, it is plain that the landings and their connecting channels on the Kanawha River were designed and constructed to meet the requirements of the old 6-foot navigation project. Manifestly some of these would not meet the requirements of the new 9-foot navigation project unless and until private and municipal interests reconstructed them and dredged the landings and harbors deeper; and hence, until that had been done, groundings were inevitable. Indeed, the evidence discloses that the water level in the Marmet pool under the new 9-foot project is 1½ feet lower than the water level which obtained in old pool No. 3 of the subsequently replaced 6-foot project (R. 2167-8). It was at the Houston landing, formerly in old pool No. 3 but then in the Marmet pool, where, according to the witness Carpenter, boats experienced trouble at times, although he could not mention any specific dates (R. 2166-7). Manifestly one would not expect a landing which had been designed for only the old 6-foot navigation project, and which has been rendered even less adequate through the lowering of the water level 1½ feet by the construction of the new navigation project, to be adequate for 9-foot navigation.

On this point, both on direct and rebuttal, petitioner produced as witnesses bargemen, lock-masters and a civilian assistant. With no desire to criticize them, they neither had nor pretended to have any knowledge of the important hydraulic and other problems involved. Apart from some of the bargemen, all these witnesses were minor subordinates of Col. Conklin, U. S. District Engineer at Huntington, W. Va., who was in charge of both navigation works on the Kanawha River and any pertinent operation of the federally licensed power plants at the Kanawha Navigation Dams. Col. Conklin could have given the Trial Court complete information, based upon a full knowledge of the physical facts with reference to navigation and navigation works and to the operation of the power plants and based also upon a complete understanding of the technical hydraulic, navigation and other problems involved.

River by a section of the old 6-foot Kanawha project then still in use. Most of these alleged groundings occurred in operations extending over both the Ohio River and the Kanawha River or at boat landings. It was plain that these boatmen yielded to the temptation to overload their barges on the Kanawha River so as to take advantage of the 9-foot project on the Ohio River (R. 1181-4; 2126, 2132-3). It is clear that the only substantiated groundings (and these petitioner does not cite) occurred in this temporary intervening stretch of the old 6-foot project at times when the power plants at the navigation dams on the Kanawha were not even in peaking operation and that they were the result of overloading in an attempt to get as large a load as possible out of the old 6-foot project on the Kanawha into the 9-foot channel in the Ohio (R. 2125-6; 2132-3; 2128). As pointed out in our brief, the absence of any claim of groundings in the Ohio confirms the evidence that the groundings in the Kanawha were the result of overloading on the old 6-foot project on the Kanawha, and also shows that the power operations in the Kanawha had not produced any groundings in the Ohio despite the fact that the changes in flow produced by the power operations in the Kanawha are many times greater than it would be physically possible to produce in the Kanawha by any conceivable manipulation of respondent's project.

The reason for groundings at the landings on the Kanawha River is plain. The Federal Government constructs the through navigation channel, but it does not construct landings or the channels leading from the through channel to landings. These are provided by private interests or municipalities (R. 2168-9). Landings require dredging and other maintenance to prevent shoaling from spilling of coal, sand, gravel and other heavy products as well as from silting. Private interests and municipalities very often, and indeed ordinarily, do not effectively maintain their landings (Carpenter, R. 2168-9).

PART III.

LEGISLATIVE HISTORY OF THE FEDERAL WATER POWER ACT AND ANALYSIS OF SECTION 23

(Supplemental to Argument under Point IV-C of Respondent's Brief, pp. 95-103)

A. Legislative history affords no basis for the contention, but in fact denies, that Congress attempted to authorize the Commission to require a license for a project located in a non-navigable stream and not involving any Federal property.

The development of Federal water power legislation was long delayed and its culmination unnatural. If difficulties are encountered in interpreting the resultant Act within the orbit of constitutional powers of Congress, these difficulties may well be attributed to the fact that a deadlock was broken by combining a public lands leasing bill with a navigable waters licensing bill, the bills being based, obviously, on sources of Congressional authority differing widely in scope and extent.[1]

Since we are here concerned not with public lands but only with the extent and nature of the authority of Congress in respect of projects in navigable waters, we shall deal only with the latter and discuss first the growth and scope of legislation to protect navigable waters and then the licensing or consent legislation which in turn was made

---

[1] The authority over projects on public lands is the full proprietary authority "to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States". (Constitution, Article IV, Section 3.) However, any authority to deal with hydro-electric projects on navigable waters is not an authority to deal with the development of water power as such, but such authority as exists arises merely from the authority of Congress to regulate navigable waters, which authority is implied in turn from that under Article I, Section 8, of the Constitution: "to regulate commerce with foreign nations, and among the several States". *Gibbons* v. *Ogden*, 9 Wheat. 1; *Gilman* v. *Philadelphia*, 3 Wall. 713.

Can there be any doubt that the petitioner would have called Col. Conklin had he been willing or able to support its contention? Yet, with such a witness at its command, petitioner chose to rely, and to ask the court to rely, upon the evidence of minor subordinates of Col. Conklin, who were not equipped by education, training, experience or a complete knowledge of the whole situation, to furnish reliable information to the Court. In any case, petitioner can not be heard to contend that either the Federal Power Commission or Col. Conklin were improperly discharging their respective duties in connection with the operation of the federally licensed power plants so far as such operation affects the navigable capacity of the Kanawha.

portions of which lie wholly within the limits of a single State, provided the location and plans thereof are submitted to and approved by the Chief of Engineers and by the Secretary of War before construction is commenced: *And provided further,* That when plans for any bridge or other structure have been approved by the Chief of Engineers and by the Secretary of War, it shall not be lawful to deviate from such plans either before or after completion of the structure unless the modification of said plans has previously been submitted to and received the approval of the Chief of Engineers and of the Secretary of War. (Mar. 3, 1899, c. 425, § 9, 30 Stat. 1151.)

"Sec. 10. (33 U. S. C. 403.) *Obstruction of navigable waters generally; wharves; piers, etc.; excavations and filling in.* The creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is hereby prohibited (*1st clause*); and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary of War (*2nd clause*); and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or inclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same (*3rd clause*). Mar. 3, 1899, c. 425, § 10, 30 Stat. 1151.) (The Rivers and Harbors Act of March 3, 1899.)

(The italicized references to clauses have been inserted in Section 10 for convenience of the present discussion.)

necessary by the strict prohibitions against placing structures in navigable waters.

1. *Prior legislation recognized clearly the distinction between the authority to regulate structures actually located in navigable waters and the authority merely to prevent acts in non-navigable waters which might affect navigable capacity below.*

The sole concerns of Rivers and Harbors legislation have naturally been first, to maintain the navigable capacity of navigable waters of the United States used in interstate and foreign commerce and, second, upon acquisition by the United States of private property rights, to improve streams, that is, to create navigability. In the instant case we are concerned only with the regulatory power to maintain navigable capacity if and to the extent that the private right is already subject to an easement in favor of use of the stream in interstate or foreign commerce.

The Act of March 3, 1899, was a comprehensive compilation and codification, without important change, of various preexisting statutes, enacted on different occasions, for the protection of navigable waters of the United States. It made important distinctions between structures located in navigable waters and those located beyond the limits of navigability.

> "Sec. 9. (33 U. S. C. 401.) *Construction of bridges, causeways, dams or dikes generally.* It shall not be lawful to construct or commence the construction of any bridge, dam, dike, or causeway over or in any port, roadstead, haven, harbor, canal, navigable river, or other navigable water of the United States until the consent of Congress to the building of such structures shall have been obtained and until the plans for the same shall have been submitted to and approved by the Chief of Engineers and by the Secretary of War: *Provided,* That such structures may be built under authority of the legislature of a State across rivers and other waterways the navigable

Obviously the criterion here is not merely the placing of an unauthorized structure in a particular location regardless of its effect, but rather the test is whether or not an adverse effect is actually produced in navigable waters themselves, impairing their navigable capacities. If so, the acts producing such adverse effect can be restrained under Section 12 of the Act, to the extent necessary to prevent any resultant impairment.

The distinctions observed in the Act of 1899 are entirely consistent with the constitutional limitations upon the power of the Federal Government discussed in respondent's brief (Point V). The United States having no power to permit or forbid the erection of a structure in non-navigable waters unless, and except to the extent that, the effect of the operation of such structure would be substantially to diminish the navigable capacity of navigable waters below, Congress did not purport to make such structures unlawful *per se*. Instead it appropriately limited the 1st clause of Section 10 to a general prohibition of any obstruction to navigable capacity, however caused and from whatever source, and limited the remedies of the United States to those of injunction under Section 12 of the Act.

2. *The extent of the power of Congress to require a license was already well defined in the Rio Grande decision and recognized by Congress.*

That the distinctions between navigable and non-navigable streams observed in the Act of 1899 were not

---

See *Sanitary District of Chicago* v. *United States*, 266 U. S. 405, 428.

The other change, though merely in phraseology, is nevertheless significant. Congress thereby expressly recognized that the only "waters in respect of which the United States has jurisdiction" are the "waters of the United States", viz., navigable waters.

As pointed out at page 227 *infra*, the fact that these expressions have been considered synonymous effectively negatives the contention which petitioners made in the Court of Appeals, but which they now apparently have abandoned (Pet. Br. 91, 92), that the 1935 amendments of the Power Act enlarge the licensing authority of petitioner beyond that conferred by the Act of 1920.

It is readily observed that Section 9 and the portions of Secton 10 which are labeled '2nd clause' and '3rd clause' relate to the placing of structures in or over navigable waters themselves and that under the statute such structures are unlawful *per se* unless specified authorization shall have been obtained. Here, over structures actually located in navigable waters, Congress in the exercise of its power to protect navigable capacity of navigable waters of the United States has proscribed, as unlawful *per se*, the placing of any structure without the specified consent.

However, in the only provision which could possibly have application to structures placed in *non-navigable* waters, viz.: the first clause of Section 10, Congress designedly has not attempted, as indeed it has no authority, to make a construction unlawful *per se*, but merely has prohibited any act, wherever or however performed, which will actually produce an adverse effect in navigable waters, i. e., which will create an obstruction to the navigable capacity thereof.[1]

---

[1] It was under the precursor of this provision, viz. Section 10 of the Act of September 19, 1890 (26 Stat. 454 § 10), as amended by the Act of July 13, 1892 (27 Stat. 110), that the decision in *United States* v. *Rio Grande Irrigation Co.*, 174 U. S. 690, was rendered. The section of the 1890 Act, as amended in 1892, read:

> "The creation of any obstruction, not affirmatively authorized by *law*, to the navigable capacity of any *waters in respect of which the United States has jurisdiction, is hereby prohibited.*"

In the Act of 1899 the corresponding clause differs from that quoted above only in the words italicized in the following transcript:

> "The creation of any obstruction, not affirmatively authorized by *Congress*, to the navigable capacity of any *of the waters of the United States* is hereby prohibited."

Thus the only change of substance in the later Act is that the authorization must now be "by Congress" instead of "by law", the reason being that an obstruction authorized by a State had been held to be authorized "by law", *United States* v. *Bellingham Bay Boom Co.*, 176 U. S. 211, and it was the desire of Congress to make it clear in the Act of 1899 that consent of Congress is required.

(*Footnote continued on next page*)

States has jurisdiction."[1] This expression, it is noted, goes to the full extent of the power of Congress in the subject matter. Indeed in its brief before this Court, by Hon. John W. Griggs, Attorney General, at page 38, petitioner then urged that this expression was broader and more inclusive than the expression "water over which Congress has jurisdiction," which Congress adopted at the instance of the Federal Power Commission in the 1935 amendments to the Federal Water Power Act.[2] This Court, however, did not even mention the contention and clearly treated the expression as synonymous with "navigable waters of the United States."

Another interesting feature of the *Rio Grande* decision was that the Bill of the United States alleged that the Rio Grande was navigable at the point of proposed diversion of the water, where the dam was being constructed. The lower Court took judicial notice that, although the Rio Grande is navigable in its lower reaches, it was not navigable at the point of the proposed construction and the Supreme Court confirmed the conclusion as to non-navigability. It was not contended that the proposed dam was "affirmatively authorized by law". Hence, if, as petitioner has heretofore

---

[1] See note 1, p. 182, *supra*.

[2] Attorney General Grigg's brief states:

> "Observe the broad generality of this language.
>
> • • • • •
>
> "'In respect to (sic.) which the United States has jurisdiction.' Not 'over which', or 'on which', or 'in which', but 'in respect to which', thereby including every possible feature of Congressional regulation and control."

Nevertheless, petitioner now contends, without justification, that "A hypothetical project might not obstruct navigable capacity under Section 10 of the Rivers and Harbors Act, yet affect the interests of interstate commerce under Section 23" of the Federal Water Power Act (Pet. Br. 92, note 17).

For the manner in which the 1935 amendments were adopted and their effect see pp. 225-230, *infra*.

fortuitous was clearly borne out by the decision of this Court in *United States* v. *Rio Grande Dam and Irrigation Co.*, 174 U. S. 690, rendered at about the time of Congress' re-statement of provisions for the protection of navigation in the Act of March 3, 1899. To refute completely any possible contention of support in legislative history for the extended jurisdiction which petitioner now claims under the Federal Water Power Act of 1920, it further appears that throughout the Congressional debate leading up to enactment of the Federal Water Power Act the limitations upon the authority of Congress and the distinctions between navigable and non-navigable waters, which petitioner now urges this Court to ignore, were forcefully presented in Congressional debate.

(a) The Rio Grande decision confirmed that Congress did not and cannot require its authorization for structures in non-navigable streams.

In the *Rio Grande* case action was brought by the United States under the Rivers and Harbors Act of 1890 (26 Stat. 454), as amended by the Act of 1892 (27 Stat. 110), to enjoin the defendant from constructing a dam across the Rio Grande River in the territory of New Mexico, and appropriating the waters of that stream for the purposes of irrigation. It was said that the dam would "create the largest artificial lake of water in the world" and a substantial part of the water would be diverted and permanently lost to the stream. The bill alleged the navigability of the Rio Grande at and below the site of the dam and that the dam would deplete and prevent the flow of water below so as to interfere seriously with the navigable capacity of the river throughout its entire course. The bill also *denied that any authority had been given by the United States for the construction of the dam.*

The law invoked prohibited "the creation of any obstruction, *not affirmatively authorized by law*, to the navigable capacity *of any waters in respect of which the United*

The Court did hold, and this is what has frequently given rise to misconstruction, that the power to restrain an act extends to acts done beyond the limits of navigability, but only if such act "tends to destroy the navigable capacity of one of the navigable waters of the United States" and, if so, only to the extent necessary to prevent substantial diminution of navigability where navigation is a recognized fact. The authority arises only by virtue of the effect actually experienced in navigable waters of the United States, since only the navigable waters themselves are subject to the jurisdiction of the United States. (See Resp. Br. 115).

This is clearly confirmed by the disposition of the case. This Court did not grant the injunction against the unauthorized construction of the dam, as prayed, unless and until it should have been "affirmatively authorized by law." Instead, it ordered an inquiry into the question

> "* * * whether the intended acts of the defendants in the construction of a dam and in appropriating the waters of the Rio Grande will substantially diminish the navigability of that stream within the limits of present navigability, and if so, *to enter a decree restraining those acts to the extent that they will so diminish*" (p. 710).

The opinion clearly shows that the consideration of the Court was fully directed to "the extent of the right of the Government to interfere" (p. 701). It is quite apparent that, if the Court had found the United States to have any "jurisdiction" in respect of non-navigable waters or the power to require a license or permit for *structures* in non-navigable streams, as petitioner now contends, the disposition of the case would have been quite different. If the Court had been of the opinion that, upon a finding that its *operation* would obstruct navigable capacity below, Congress' prohibition had been directed to the *structure* itself, in a non-navigable stream, unless "affirmatively authorized by law", obviously the mandate would have been, as prayed

contended in the instant case,[1] non-navigable tributaries are included within the "waters in respect of which the United States has jurisdiction" the Court would have held the proposed dam unlawful *per se*, and clearly prohibited as an "obstruction, not affirmatively authorized by law"; and consequently the United States would have been entitled *in limine* to a decree enjoining the construction of the dam until "affirmatively authorized by law". Clearly this Court did not so hold and did not regard the proposed structure as unlawful *per se*, requiring affirmative authorization or license. On the contrary, it clearly held that the only waters "in respect of which the United States has jurisdiction" are navigable waters of the United States, navigable in interstate commerce, and that the statute, even under its broadest prohibition, did not make the structure an unlawful one. Regarding the statute the Court said:

> "its only purpose, as is obvious, was to affirm that *as to navigable waters* nothing should be done to obstruct their navigability without the assent of the National Government" (p. 708).

and again:

> "The question always is one of fact, whether such appropriation substantially *interferes with the navigable capacity* within the limits where navigation is a recognized fact" (p. 709).

---

[1] In the Court of Appeals petitioner strenuously contended that the 1935 amendments proposed by the Federal Power Commission, by which Congress substituted waters "over which Congress has jurisdiction" in lieu of "navigable waters of the United States", extended *ipsis verbis* the jurisdiction of Congress to non-navigable tributaries. Petitioner erroneously claimed that the power to prohibit the doing in non-navigable waters of an act which would produce an impairment in navigable waters, gave Congress a certain "jurisdiction" over the non-navigable waters. Whether recognizing the unsoundness of its contention or desiring to avoid in this Court the accusation that the representative of the Commission misled the House Committee in assuring them that the proposed amendments did not enlarge the jurisdiction of the Committee (See p. 228, *infra*), petitioner seems no longer to advance this contention.

gation is a recognized fact, as of course it does not, petitioner would fail in its contentions for precisely the reasons ennnciated by this Court in the *Rio Grande* decision. There the same contentions were raised and effectively disposed of. Petitioner then sought to enjoin the construction of the dam in question, located in non-navigable waters and designed to divert a substantial volume of water from the stream, without affirmative authorization from Congress. This Court in that decision denied, as it must here deny, petitioner's contention, since, even if operation of the dam were to obstruct navigable capacity below, the structure itself, located in non-navigable waters, is not subject to the prohibition in the Act of 1899, and therefore its unauthorized construction cannot be enjoined; but petitioner's remedy is limited to restraining the operation of the dam to the extent that it will diminish navigable capacity below.

Thus, far from having a cause of action under the Federal Water Power Act when none exists under the Act of 1899 (Pet. Br., 92, Note 17), it is clear that no cause of action exists under the Federal Water Power Act of 1920 to require a license for a project on a non-navigable stream, although in a hypothetical case, on facts different from those in the instant case, petitioner might well have a cause of action under the Act of 1899 where none exists under the Federal Water Power Act. Indeed the principles of the *Rio Grande* decision, when applied to the interpretation of the Federal Water Power Act, necessarily lead to the conclusion (which, as will be shown, is supported by the language of the act) that the authority of the Commission to require a license (viz., the affirmative authorization of Congress) is limited to structures actually placed in navigable waters of the United States, as Congress appropriately limited the basic prohibition in the Act of 1899.

However, despite the clarity of its holding, petitioner continues to misread or misconstrue the *Rio Grande* decision. Petitioner erroneously states (Pet. Br., p, 123) "The *Rio Grande* case would seem on principle to settle the power

in the Bill, to enjoin the construction of the dam until "affirmatively authorized by law".

Rather, the decision clearly shows, contrary to petitioner's assertions, that Congress has no jurisdiction over *structures*, as such, in non-navigable streams and cannot prohibit them or subject them to any requirement of affirmative authorization or license even if it should be found that their *operation* resulted in impairment of navigable capacity, but instead that its power exists only if such impairment is found to result. In such case it cannot require for the structure any affirmative authorization or license, but it can, of course, restrain or prevent acts which result in actual impairment of navigable capacity.

In considering the application of the *Rio Grande* decision to the interpretation of the Federal Water Power Act, let us apply the principles there laid down by this Court to the facts involved in the instant case and consider the contentions which petitioner now makes herein.

Petitioner has applied for an injunction under the Act of 1899 and under the Federal Water Power Act against the construction, maintenance and operation by respondent of its Radford project, alleging it to be located in navigable waters of the United States, and, alternatively, to impair navigable capacity below. Petitioner has conceded that under the facts found in the lower courts it has no cause of action under the Act of 1899. Although there is no new prohibition therein[1], it seeks to invoke the Federal Water Power Act in an effort to enjoin the maintenance of respondent's project in non-navigable New River unless and until the project shall have been "affirmatively authorized by Congress", asserting that the Federal Power Commission, as the Agency of Congress, is empowered to require and grant such affirmative authorization in the form of a license under the Federal Water Power Act.

Even if operation of respondent's project were to obstruct navigable capacity many miles below, where navi-

[1] See pp. 199-200, *infra*.

Co., 206 U. S. 230. There Georgia had no jurisdiction over what was done in the State of Tennessee. Its rights were held to rest solely upon the effect produced in the State of Georgia and were limited to restraining the acts in Tennessee to the extent necessary to prevent substantial adverse effect in the State of Georgia.

(b) The limitations upon Congress' authority and the distinctions between navigable and non-navigable waters were clearly borne in mind by Congress in enacting the Federal Water Power Act.

Various Committee reports and the Congressional debate throughout the long period of consideration of water power legislation show that it is not merely a courteous assumption, but a fact, that Congress legislated with a keen realization of the limitations of its constitutional authority. Until 1906 the customary mode of obtaining affirmative authorization from Congress for hydro-electric projects in navigable streams was to apply for a special act of Congress. Numerous such special acts had been passed until President Theodore Roosevelt by letter of April 13, 1908 advised the Senate Committee on Commerce that he would veto any bill which did not provide specifically for a charge or revenue to be paid to the Federal Government.[1] This statement and subsequent vetoes, upon which petitioner erroneously seems still to place some reliance (Pet. Br. 116, 117), putting an end to water power development on navigable streams, brought forth successive bills to

---

[1] This view was directly answered in 1920 by Senator Nelson, who was in charge of the Federal Water Power Bill in the Senate, when he stated:

> "As a matter of law, aside from purposes of navigation, the use of the water in the different streams of the several States belongs to the people of those States and not to the Federal Government. The argument insisted upon amounts to this: That the Federal Government is to sell and to make a charge for water that does not belong to it, but which belongs to the people of the States," (Cong. Rec. Vol. 59, Pt. 2, p. 1430) (Jan. 12, 1920).

of Congress to prohibit the construction of unlicensed projects in non-navigable streams even though their effect were to benefit rather than to obstruct navigable capacity" —whereas, on the contrary, it clearly denies such power. Earlier (Pet. Br., p. 122) it cites the *Rio Grande* decision in support of the proposition that there is no question of the power to forbid or to compel modification of, a project in a non-navigable stream which impairs navigable capacity elsewhere and states "there is an equal power to license such a project". In the *Rio Grande* case, of course, the Court denied the injunction against unauthorized construction of the project, limiting the relief to restraining such acts as would diminish navigability in fact. In support of its contention petitioner continues to cite, as it did with more persistence in the lower courts, *North Bloomfield Gravel Mining Co.* v. *United States*, 88 Fed. 664 (C. C. A. 9th), completely ignoring the fact that the *North Bloomfield* decision preceded the *Rio Grande* decision by a year and never reached the Supreme Court. Indeed the earlier mining debris case, *Woodruff* v. *North Bloomfield Mining Co.*, 18 Fed. 753, was strongly but ineffectually urged upon this Court in argument on the *Rio Grande* case but was not even dignified by mention in the opinion of the Court.[1]

The situation of the United States in relation to structures outside navigable waters is in principle similar to that of the State of Georgia in *Georgia* v. *Tennessee Copper*

---

[1] See brief of the United States, by Attorney General John W. Griggs, pages 43 to 47.

Clearly, if it could be given the effect claimed by petitioner the *North Bloomfield* decision was necessarily overruled by the *Rio Grande* decision. Were it necessary it could, of course, be shown that the *North Bloomfield* case involved the actual use of navigable waters for the conveyance of debris to the open ocean and violated a statute prohibiting the use of an instrumentality of interstate commerce for a harmful purpose, in addition to the fact that the legislation there involved was in effect concurrent legislation by the United States and the State of California, having been enacted at the solicitation of the California Legislature and in effect ratified and adopted by the latter.

"3. That the Federal Government in its jurisdiction of interstate commerce has control of navigable streams and has a certain degree of responsibility for their improvement. Under this theory it is maintained that tolls upon the water power developed can be collected and paid into a fund for the improvement of navigable streams, including not only the one on which the toll is charged, but all others capable of improvement for navigation.

"The commission is of the opinion that the Federal Government has no proprietary right or interest in navigable waters which would authorize the collection of tolls. The right, if it exists at all, rests upon either the second or third theory stated. As regards the second theory, it should be said that the imposition of tolls, unless based upon a more substantial foundation than the mere authority to grant or withhold consent—an authority arising solely from the control of the Federal Government for the purposes of navigation—does not commend itself to the commission, and it is to be doubted whether, even in case a bill should be passed or other action taken by Congress for granting this permission, with a provision for charging tolls, such tolls could be collected. Regarding the third theory stated, it should be noted that under the exercise of the taxing power Congress can levy taxes for general revenue purposes upon all classes of water power, whether in navigable or non-navigable streams, and if charges are to be imposed it would seem that this is the normal method. It should further be borne in mind that a requirement for the imposition of tolls where the right to construct dams is hereafter granted would cause a discrimination between water power to be utilized under future permits and those already enjoyed, which are subject to no such charge. It must of course be remembered that whenever the privilege of constructing dams is granted in a navigable stream there is an undoubted right to impose charges sufficient to pay the expenses of examination and supervision and to secure the Government against cost by reason of obstacles to navigation created by the erection of dams; but this rests upon an entirely different principle from the proposal to charge tolls.

authorize licensing of projects in navigable waters and much serious discussion of the proper limitations to which Congressional action in regard to navigable waters must constitutionally be subject. For instance, in the report rendered January 24, 1910, by the Commission created by Act of Congress of March 9, 1909, under the chairmanship of Senator Burton of Ohio, these limitations were clearly recognized:

> "The right of the Federal Government in water power may be viewed from three different standpoints:
>
> "First. Cases in which power is developed on streams located in public lands, where undoubtedly the Government, so far as the rights pertaining to abutting ownership are involved, has full control, and should exercise the greatest care in granting away whatever rights it may have.
>
> "Second. When power is developed in non-navigable streams, where there is private or state ownership, in which case no federal authority to regulate or control exists, except to prevent interference with the navigation of other streams.
>
> "Third. When water power is developed in navigable streams. In this case several plans have been proposed for the collection of tolls upon the water power developed by dams whenever their construction is permitted by Congress. The right of the Federal Government to collect such tolls must rest on one of three theories:
>
> "1. That the Federal Government has some proprietary right in the waters of navigable streams, so that the collection of tolls can be based upon actual ownership of, or right in, the waters.
>
> "2. That, as the right to grant or withhold consent for the construction of a dam in navigable waters rests in Congress, it is allowable to make a charge for the consent or privilege and authorize the collection of tolls.

gress in 1920 intended to assert the extended jurisdiction and authority which the Federal Power Commission itself at first disclaimed but which petitioner now asserts.[1]

---

[1] For the gradual development of petitioner's present contentions, turning away from the limitations recognized when the bill was enacted, and expressed therein, see pp. 206-212, *infra*.

A clearer appreciation of the constitutional limitations upon the power of Congress can hardly be found than that stated by Senator Shields on January 8, 1917, in debate on the feature which had held up for more than ten years legislation authorizing hydro-electric developments in navigable streams—the proposal to exact a federal toll or charge:

> "'These authorities clearly and conclusively demonstrate that the United States has no general sovereignty over navigable rivers, that the people of the United States in their national character have no property interest in them, and Congress cannot constitutionally exact rents or royalties, to be covered into the Federal Treasury as proposed, and that such legislation must necessarily be a usurpation of the sovereign powers of the States and confiscatory of their property and that of their citizens. Argument in support of these obvious conclusions would be an abuse of the patience of the Senate and an offense to its intelligence.
>
> "These contentions are now conceded by some of the advocates of these Federal rents and royalties who are familiar with the authorities, and they have been driven to rest the power of Congress to compel the payment of them upon the proposition, as I understand it, that the United States, through Congress, has the power to grant to the States and their grantees permits necessary to authorize them to construct dams in navigable streams, and in exercising this power may impose such conditions as Congress deems proper.
>
> "This must carry with it the assertion that this can be done, although the proposed structure will not obstruct but improve navigation, and the purpose of it be lawful and laudable, and the terms or conditions imposed are beyond the affirmative powers of Congress, and in direct violation of the express provisions of the Constitution.
>
> "Mr. President, these are most astounding propositions of constitutional law and public policy, difficult to reconcile with the spirit and genius of constitutional government and the guaranties which it affords to the personal and property

(*Footnote continued on next page*)

> "The control of the Federal Government over navigable streams has to do with navigation only, and in the exercise of this jurisdiction the plan commends itself to the commission of inserting in each grant or franchise under which the consent to construct a dam is given a condition that the grantee who constructs the dam must also, whenever necessary to subserve the interests of navigation, construct a lock suited to the locality and to the probable development of traffic, and also furnish power for the proper operation of the lock or locks. These requirements, rather than the imposition of tolls, appeal to the commission because they are free from legal objections and are in entire accordance with the objects for which the Federal Government has jurisdiction over navigable streams." (Senate Doc. 301, 61st Cong. 2d Sess., pp. 23-4.)

Later, much discussion revolved about the Shields Bill for licensing projects in navigable waters. In this debate Senator Shields of Tennessee, the author of the Bill, and Senator Sutherland of Utah, who actively participated in its discussion, clearly recognized the constitutional limitations upon the power of Congress, forcefully pointing out that the only authority the United States has in the premises is to protect the navigability of a stream and that in all other respects the development of water power is a matter wholly within the control of the States. (Congressional Record Vol. 53, Pt. 3, pp. 2580, 2641, 2651, Feb. 15 and 16, 1916; Vol. 53, Pt. 4, p. 3244, Feb. 28, 1916; Report of "Five Ablest Lawyers of the Senate"—Senators Nelson, Root, Chilton, O'Gorman and Culberson, Vol. 54, Pt. 6, pp. 779-84; Vol. 54, Pt. 1, pp. 1006-7 Jan. 8, 1917; Vol. 54, Pt. 4, pp. 1264-68, January 12, 1917; Vol. 54, Pt. 3, p. 2786, February 7, 1917; Vol. 58, Pt. 3, p. 2226, July 1, 1919; Vol. 59, Pt. 1, p. 1041, Jan. 5, 1920; Vol. 59, Pt. 8, p. 7723, May 27, 1920; Vol. 59, Pt. 7, pp. 6529-6531, May 4, 1920.) In the light of the clear discussion of constitutional limitations throughout this period it can now ill be argued by petitioner that Con-

clearly shown by the report dated June 24, 1919 by Chairman Esch of the House Committee on Water Power, with reference to a bill presented June 28, 1918 by the Congressional Joint Water Power Committee. That report stated:

> "In a letter dated April 13, 1908, President Roosevelt in a communication addressed to the Senate Committee on Commerce, gave notice that he would not sign any bills hereafter which did not provide specifically for a charge and a definite limitation in time of the rights conferred.
>
> "These vetoes in 1908 and 1909 practically put an end to the introduction of water power bills.
>
> * * * * * * *
>
> "The Ferris bill reported by the Committee on Public Lands and which passed the House on August 24, 1914, relating to water powers on the *public domain*, failed of passage, as did a like bill reported by the same committee and passed by the House January 8, 1916. The Committee on Interstate and Foreign Commerce had no better success with the Adamson bill providing for the construction of dams on *navigable waters*, which passed the House August 4, 1914, and a like bill which passed the House July 14, 1916. Each of these four measures, which received the approval of the House in prior Congresses, contained practically every one of the provisions and requirements set forth in the veto messages of President Roosevelt, but not one of them received the approval of the Senate, due to the objections based largely on the ground that Congress has no right to exact a charge for the development of water power and with special reference to power developed on navigable streams." (House Report 61, 66th Cong. 1st Sess., pp. 3-4.)

The manner in which the deadlock was finally broken, by a combination of two bills based on widely differing sources of authority, is shown in the first annual report of Federal Water Power Commission:

> "*The combined bill* approved on June 10, 1920, *finally broke the deadlock that had existed for more*

It is significant that the Shields Navigable Waters Bill (Cong. Rec. Vol. 53, Pt. 3, pp. 2197-8), as its name connotes, dealt solely with the licensing of projects in navigable waters. The Bill contained no provision for federal regulation of intrastate rates or for recapture, except on the basis of fair value, and observed the criterion for which the Senate had steadfastly contended, that the Federal Government has no power to exact a charge or rental for the use and development by riparian owners of water power rights, even in navigable waters.

The impasse which was created by the early vetoes and the background for the unfortunate combination of a navigable water licensing bill with a public lands leasing bill are

---

rights of a free people. Is it possible that Congress can by constructive force and duress usurp the sovereign powers of the States and confiscate the property held in trust for their citizens? Can the fundamental law be thus evaded and violated to force the States and their citizens to yield to an unlawful and unjust exaction under the penalty of being arbitrarily prohibited from the use and enjoyment of their property? The premises of this proposition are fallacious. The United States has no general police power over or proprietary rights in navigable waters to grant.

* * * * *

"Such legislation would also violate the fifth amendment, ordaining that private property shall not be taken for public use without just compensation. The imposition of a charge or burden, however small, upon private property for a public purpose without compensation is confiscatory and forbidden by the fundamental law. I do not consider it necessary to cite authority to support such an obvious proposition, but the question has been directly passed upon in the cases of *Rossmiller* v. *States* (114 Wis. 169, 188); *Cary Library* v. *Bliss* (151 Mass. 364, 378); *Woodward* v. *R. R. Co.* (180 Mass. 599-603); *Chicago R. R. Co.* v. *Illinois* (200 U. S. 593)" (Cong. Rec. Vol. 54, Pt. 1, pp. 1006-1007 Jan. 8, 1917.)

Obviously the argument against authority to impose federal tolls or charges applies with equal force and like effect to the authority to impose the capture clause and other provisions of the Federal Water Power Act unrelated to the protection of navigation and restricting the use of and return from, and impairing the value of, property of a licensee. See Resp. Br. p. 121, *et seq.*

the navigability of a given stream at a particular point had been recognized by a judicial decision, the point where navigability ceased and beyond which the stream was non-navigable was left undetermined.

In earlier years many parties, solely out of abundant caution, had petitioned for and obtained Congressional approval to construct dams even though there was but slight possibility that the streams might be held to be navigable waters of the United States. After the Presidential vetoes had ended the possibility of obtaining special acts, not only was construction of hydro-electric projects in navigable waters definitely held up but in the many border-line cases of doubtful navigability construction was deterred by fear that the stream at the point in question might subsequently be determined by court decision to be navigable and the structure consequently unlawful. It is not surprising therefore that the legislation finally enacted, so far as concerns navigable waters, attended two purposes: first, to grant the authorizations clearly required and theretofore lacking in streams known to be navigable and, second, to afford to a party intending to construct a development a means of obtaining at least an administrative determination of the character of the stream in cases of doubtful navigability.

It is essential to a true construction of the Act to observe that it was in no sense prohibitory, but in every aspect a consent or licensing statute. This was clearly brought out in debate. On several occasions question was raised as to whether the Bill would prohibit any additional classes of streams. To one such question the late Senator Walsh of Montana replied:

> "Mr. President, I wish to remind the Senator from Utah, that the prohibition *is not in the pending bill. The prohibition is in the law now. A person can not do it at all now without an act of Congress, while under the pending bill he can get a permit from the commission.*" (Cong. Rec., Vol. 59, Part 8, 8349, 1920).

than a decade in Federal water-power legislation.'' (Federal Power Commission, First Annual Report, p. 49.)

This ill-advised combination of two bills based on widely differing sources of power is important in several respects:

First, it extenuates, though it does not justify, Congress' apparent attempt to impose on projects in navigable waters licensing conditions bearing no reasonable relationship to the protection of navigation, and therefore unconstitutional; and

Second, it emphasizes the need, under familiar principles of statutory construction, to restrict rigorously, rather than to extend, the authority which the statute may be claimed to confer.

However, as the record clearly shows, Congress neither revealed an intent nor utilized language to support an extension of the authority now claimed by petitioner to require a license for projects on non-navigable streams not involving federal lands or property.

3. *The Federal Water Power Act was merely a consent statute creating a Governmental Agency to authorize projects (in navigable waters) otherwise unlawful under the Act of 1899.*

The purpose of the early Rivers and Harbors legislation was to maintain and improve inland navigation as the principal arteries of commerce. However, with the turn of the century, the contemplated investment of substantial capital in hydro-electric developments in navigable streams presented more and more cases where, in face of the prohibition of the Act of 1899, a special act of Congress might be necessary, depending upon whether the proposed development was to be located in a navigable stream. The navigability of but few rivers had been determined by judicial decisions and the status of many streams was in doubt. Even when

4. *Section 23 was designed merely to afford intending developers a means of obtaining an administrative determination of the character of the stream in Cases of Doubtful Navigability.*

We deal here with the second paragraph of section 23 of the Federal Water Power Act of 1920. We shall deal later with the 1935 amendments which clearly did not enlarge, and indeed were represented to Congress by the Commission as not enlarging, the power of the Commission.[1]

Section 3 of the Act of 1920 defined navigable waters for the purposes of the Act. Section 4(d) defined the licensing power of the Commission, the authority being limited, so far as relates to navigable waters, to projects "for the development and improvement of navigation, and for the development, transmission and utilization of power across, along, from or in *any of the navigable waters of the United States* * * * or for the purpose of utilizing the surplus water or water power from any government dam." (Italics added.) Section 6 limited the period of license to 50 years. Sections 10 and 14 contained numerous general conditions for the standard form of license, many of which, though perhaps appropriate to a license for a project on public lands or reservations, are not appropriate and are beyond the constitutional power of Congress for projects in navigable waters, where the only source of jurisdiction of the United States is derived from the Commerce Clause.

It is the second paragraph of section 23 of the 1920 Act which petitioner claims has conferred jurisdiction upon the Commission to require and issue a license for projects on non-navigable streams. However, the entire record of au-

---

[1] Neither from the circumstances under which they were adopted nor by the language employed do the 1935 amendments change the necessary interpretation of the pertinent provisions of the 1920 Act. In fact, as will be shown, the language employed prejudices petitioner's interpretation. See pp. 228-230, *infra*.

At another point the same Senator stated:

> "This is the purpose of the bill. Under the existing law anyone who wants to put any *obstruction* whatever in a navigable stream must come to Congress and get a special act. The pending bill is a general act granting power to give permits through this commission. That is the purpose of it." (Cong. Rec., Vol. 59, Part 8, 8349, 1920).

The Federal Power Commission itself, as late as 1924 through an opinion by its chief counsel, recognized that

> "The Commission has not been given general authority to protect navigation or power interests." (Fourth Annual Report of the Federal Power Commission 1924, p. 187).

It was abundantly clear through the period of Congressional discussion that Congress had no intention of extending, if indeed it constitutionally could have extended, the jurisdiction which it had theretofore exercised over navigable waters through the Rivers and Harbors Act of 1899 and prior legislation. When in later years the Commission sought to extend its jurisdiction to embrace respondent's project, it vainly searched for a prohibition which the act did not contain or some provision under which, contrary to the legislative history and the intent of Congress, it could assert authority to require licenses for projects on non-navigable streams. As late as 1930 it had failed to find any such provision and was forced to rely merely upon "suitable inference".[1] It is obvious, however, that this consent Act did not purport to extend, if indeed it could lawfully extend, the jurisdiction of the Commission beyond that theretofore exercised (and still exercised) by the War Department under Act of March 3, 1899.

---

[1] See p. 209, *infra*.

If, as the Managers state and is so abundantly clear, the purpose of the section is to prescribe how a stream of doubtful navigability "may be determined as within the provisions of the law", the section itself clearly prescribes no new criterion as to whether or not a Congressional authorization or license is needed, but can refer only to the criterion established by the Act itself, i. e. location of the structure in navigable waters, under section 4(d). This, of course, is the same criterion as that of structures unlawful *per se* under the Rivers and Harbors legislation, for which the new Act was designed to provide a licensing system or consent. Thus the language employed in the authoritative explanation of the section confirms that its terms do not purport to authorize an extension of licensing authority into new fields of jurisdiction or beyond navigable waters.

If further substantiation of the clear purpose of section 23 be required, it can readily be found in statements in debate by those Senators charged with responsibility for the bill. Thus Senator Nelson of Minnesota, who was in charge of the bill in the Senate, stated on January 6, 1920:

> "I want to call the attention of the Senator in this connection to another provision of the bill, in Section 23, which relates to the construction of dams over portions of streams *that are not navigable.* The commission in that case is authorized to investigate, *and if it finds that they are local streams, not navigable, not used for interstate commerce,* it can grant authority for the improvement of the streams, subject to State Laws." (59 Cong. Rec. 1103.)

Here Senator Nelson used the premise that the section "relates to construction of dams over portions of streams *that are not navigable*", but, despite that premise and in such disregard of it as to show that it is not yet established, he went on to explain that under the section the Commission is to determine the very question whether these

thoritative pronouncements in the legislative history of the Act denies that contention.

The second paragraph of section 23 was proposed as amendment No. 58 in the reports of the Conference Committees of the two Houses, as follows:

> "That any person, association, corporation, State, or municipality intending to construct a dam or other project works across, along, over, or in any stream or part thereof, other than those defined herein as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce between foreign nations and among the several States, may in their discretion file declaration of such intention with the commission, whereupon the commission shall cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction, such person, association, corporation, State, or municipality shall not proceed with such construction until it shall have applied for and shall have received a license under the provisions of this Act. If the commission shall not so find, and if no public lands or reservations are affected, permission is hereby granted to construct such dam or other project works in such stream upon compliance with State laws."

The statement of the Managers on the part of the House of Representatives (the only statement from either Conference Committee on this provision) says:

> "*This amendment seeks to prescribe how a stream of doubtful navigability may be determined as within the provisions of the law,* and in substance it provides that the commission shall ascertain whether the interests of commerce are affected; if not, then permission is granted to construct in accordance with the State laws." (House of Representatives Report No. 910, 66th Congress, 2d. Session; 1, 242.)

ment of the commission with reference to *whether a stream is navigable,* if they desire to do it. That is *for the protection of any person who contemplates putting a dam in a navigable stream.* If they exercise the right given to them in this section of the bill, the commission will first make an investigation *to see whether or not the stream is navigable,* and they can not put their dam in if the commission says that it is navigable; *but if the commission says that it is not navigable,* then permission is granted to put the dam in. However, there is nothing which requires them to come to the commission in the first instance and ask their judgment as to whether the stream is navigable or not." (59 Cong. Rec. 8349)

The premise here, it will be noted, is that a party "contemplates putting a dam *in a navigable stream*", yet the conclusion which the Chairman of the Committee on Interstate Commerce reached was the same as that reached by Senator Nelson on the opposite premise, that the duty of the Commission under the section is to make an investigation and verify the premise.

What more convincing proof could be had that the section was designed to deal with streams the character of which was not known at the time the declaration of intention was filed and that it was to provide means for an administrative determination of the character of the stream? Indeed it is obvious that the premise, as to the status of the stream, upon which the declaration of intention is filed is utterly immaterial to the ultimate determination by the Commission. While they were considering the same language (section 23), the Senator in charge of the bill refers to a nonnavigable stream as being the subject of a declaration of intention, while the Chairman of the Senate Committee on Interstate Commerce, to which this and preceding bills had been referred, speaks of a navigable stream as being the subject of declaration of intention. This merely confirms the clear intent as shown by the conference reports. Surely the thought is clear, in both of these statements, that at the

very streams and the particular portions thereof are in fact non-navigable, i. e. That is, the Commission is to verify the premise. Thus it is clear that when a declaration of intention is filed, it is the premise of non-navigability which itself is in doubt.

In the light of conditions then existing this interpretation is quite natural and fully explains the language actually employed in section 23. This provision was obviously designed to facilitate and encourage the construction of hydroelectric developments which had theretofore been deterred by uncertainty as to the exact character of the stream and uncertainty as to whether, if the stream should later be judicially determined to be navigable, the consent of Congress could be obtained. There were many parties intending to construct projects in non-navigable streams if the uncertainty in cases of doubtful navigability could be dispelled; and it was precisely to enable such parties to obtain an administrative determination of the character of the stream, in cases of doubtful navigability, that this provision was inserted, as clearly appears from the above-quoted statement of the House Managers.

This is further established, and the doubt as to the character of the stream emphasized, by the statement in reference to the same provision made on May 27, 1920, by Senator Jones, Chairman of the Committee on Interstate Commerce, who had an important part in the enactment of the bill. This statement involved a premise opposite to that in the above-quoted statement by Senator Nelson. Yet Senator Jones reached the same conclusion. (The reference to amendment No. 58 is to the provision, which, pursuant to the report of the Conference Committee, became the second paragraph of section 23, here under consideration.) Senator Jones stated:

> "May I suggest further in connection with this matter that the Senate placed amendment No. 58 on the bill, under which it provides a way by which a person or company or corporation may get the judg-

could be acquired." (First Annual Report, Federal Power Commission, p. 54.)

In the fourth year of its administration the Commission still recognized that the Act was only complementary to the Rivers & Harbors Act of March 3, 1899, to provide means for granting the consent of Congress without the need of special legislation in each case. It stated:

> "The Commission has not been given general authority to protect navigation or power interests." (Fourth Annual Report of the Federal Power Commission, page 187.) (Opinion of Chief Counsel, dated February 19, 1924, approved by the Commission.)

Shortly thereafter, however (and also shortly after the filing of the declaration of intention in regard to defendant's project, under section 23 of the Act[1]), the Federal Power Commission began to perceive the possibilities of extending its jurisdiction over further hydro-electric projects. It sought therefore to read into section 23 a purpose beyond that contemplated by Congress, in order that it might claim an authority, which Congress itself had never claimed, to require a license for projects in non-navigable streams which were theretofore subject (and constitutionally so) only to State authority except as to action under the Act of 1899 to restrain actual or threatened impairment of navigable capacity below. To do this, however, it had to reverse a precedent which it had followed for seven years. Until 1927 the Commission itself did not give to the language in section 23 the effect which it now claims, i. e. that section 23 relates exclusively to non-navigable waters and consequently (so it contends) authorizes the Commission to require licenses for projects located therein.

Thus for seven years when declarations of intention were filed before it and the Commission found the contemplated project to be located in navigable waters of the

[1] June 1, 1925.

time his declaration of intention is filed the party intending to erect the structure is in doubt about the character of the stream in which his project is to be located and that the sole intent and purpose of the section is to provide for an administrative determination as to navigability.[1] This discussion by authoritative Senators sustains and corroborates the statement by the House Managers that the purpose of the amendment was merely to prescribe how a stream of doubtful navigability may be determined as *navigable vel non.*

5. *Petitioner's claim of authority to require a license for projects on non-navigable streams results from a strained and belated administrative interpretation, not from any intent of Congress.*

The Power Act has been on the statute books for more than twenty years. The development of petitioner's present assertion has been of slow growth, but is fully documented in the records of the Federal Power Commission itself.

It is significant that in the first annual report of the Federal Power Commission the purpose of section 23 (second paragraph) of the Act was clearly recognized and was stated in substantially the language employed by the House Managers of the Conference Committee in the only authoritative statement regarding that section.[2] In that report, at page 54, the Commission stated:

> "The Federal Water Power Act did not propose to bring any new streams within the authority of the Federal Government. *It proposed rather to provide a method whereby the status of doubtful streams could be determined,* and to set forth in definite form the conditions under which rights upon such stream

[1] Being a jurisdictional determination, it is of course subject to judicial review and determination *de novo. Crowell* v. *Benson,* 285 U. S. 22.

[2] See page 202 *supra.*

However, after this *volte-face* regarding section 23, the Commission was not sure of its ground.

Thus, in 1928 after respondent had been tendered a major or standard form of license and had offered, in order to settle its differences with the Commission and to avoid this extensive litigation, to accept a license containing any provisions reasonably appropriate to the protection of any possible interest of navigation, respondent applied for a minor part license and the Commission referred the matter to the Attorney General for opinion. Upon receiving the opinion of the Attorney General that a license containing solely conditions appropriate for the protection of navigation could properly be issued and that "this interpretation appears necessary in order to avoid serious questions regarding the constitutionality of the Act",[1] and in explanation thereof, the Commission in its Tenth Annual Report (1930) stated:

> "There is no requirement in the law which compels the builder of a project on a non-navigable stream to come before the commission, but if he elects to do so by filing a declaration of intention pursuant to section 23 of the act and the commission thereupon finds that the project may have some effect on navigable waterways, it has been considered that the construction of the project could then be permitted to proceed only under a license authorization in the same form as for projects in navigable waters. *The law contains no express authority for the issuance of licenses for such projects on non-navigable streams, but the authority to do so seemed a suitable inference from the provisions of section 23.*
>
> "The proceedings of this character before the commission have not been numerous and licenses have been issued in only five cases. Nevertheless, a number of the States look upon the practice as the beginning of far-reaching usurpation of power by the Federal Government which will inevitably lead to

[1] R. 2781, 6.

United States it did not dismiss the declaration of intention as not involving a project in a non-navigable stream.[1] Rather, it was only when the possibility loomed of imposing the license conditions upon respondent's project, and others similarly located in non-navigable waters, that the Commission arrogated to itself the purported function of complete guardian of the interests of navigation and power. In 1928, in order to lay the basis for its new contentions, it corrected this apparent inconsistency in its prior actions.[2]

---

[1] "Navigable waters" findings on declarations of intention under Section 23 as shown in Federal Power Commission Reports:

Declarant	*Date*	*Annual Report*
F. D. Breit	Oct. 31, 1921,	2nd, p. 89
Pigeon River Lumber Co.	Oct. 31, 1921,	2nd, p. 89
S. A. Tescher	July 3, 1922,	3rd, p. 24
S. A. Tescher	Sept. 9, 1922,	3rd, p. 161
Susquehanna Power Co.	Sept. 30, 1922,	3rd, p. 161
Hydro-Electric Co. of Harrisburg	Sept. 19, 1923,	4th, p. 99
Bowersock Mills & Power Co.	Aug. 11, 1923,	4th, p. 99
Hydro-Electric Co. of Harrisburg	Sept. 19, 1923,	4th, p. 113
John A. Shafer	Nov. 24, 1920,	4th, p. 114
Town of Galena	Dec. 26, 1923,	4th, p. 139
W. J. Loughridge	Dec. 27, 1924,	5th, p. 26
Interstate Power Co.	June 16, 1924,	5th, p. 26
Riverside Irrigation District	Nov. 13, 1924,	5th, p. 26
West Florida Power Co.	Feb. 12, 1925,	6th, p. 33
Ozarks Hydro Electric Co.	Oct. 6, 1925,	6th, p. 33
West Florida Power Co.	Dec. 8, 1925,	7th, p. 35
Priest, Jess, and Williams	Dec. 14, 1927,	8th, p. 42.

[2] Declaration No. 110 was filed by Fox River Paper Company on April 25, 1928, for a project in the Fox River at Appleton, Wisconsin. On September 10, 1928, the Commission advised the declarant that the Fox River was a navigable waterway of the United States, "that this is not a case, therefore, in which a declaration of intention under section 23 of the Federal Water Power Act applies, and that in the event that it is desired to have this structure legalized, it will be necessary to submit an application for license therefor in accordance with regulations 2 and 6 of the Rules and Regulations of the Commission." (Supplement to Decisions of the Federal Power Commission on Declarations of Intention under section 23 of the Federal Water Power Act—December, 1929, page 22.)

for such projects on non-navigable streams, we find the Commission took occasion to propose, in connection with the Public Utility Holding Company Bill of 1935, amendments to the Federal Water Power Act which were represented by the authorized spokesman of the Commission as "not enlarging the power of this Commission"* but which petitioner in the lower courts sought to contend expressly confer upon the Commission the authority to require a license for projects in non-navigable streams.

Thus is charted the progress of administrative interpretation and the disregard and subsequent perversion of the legislative history and intent of Congress. A provision which at first was admitted to be, as Congress intended, a means "to provide a method whereby the status of

---

* The amendments are referred to in the Report of Senate Committee on Interstate Commerce, Senate Doc. 621, 74th Cong., 1st Sess., p. 17, as follows:

> "The amendments to the present Federal Water Power Act have been *requested by the Federal Power Commission* on the basis of its experience in the administration of that act. *Most of them are designed merely to clarify the act in its application to situations that have arisen in its administration.*"

To like effect see Report of House Committee on Interstate and Foreign Commerce, House Doc. 1318, 74th Cong., 1st Sess., p. 7; In testimony at the House hearings on the amendments Dozier DeVane, Solicitor of the Commission, who appeared on its behalf stated:

> "Mr. Mapes. And you are not proposing to amend the licensing section or provisions of the Water Power Act?
>
> "Mr. DeVane. *The new matter makes no amendments to the licensing sections of the Water Power Act.*" (Hearings on Public Utility Holding Company, Bill, 1935 (Part I) p. 450).

And again:

> "Mr. DeVane. * * * *it is my belief that insofar as our amendment is concerned, we are not enlarging the power of this Commission.* We are simply endeavoring to clarify section 4, and if Congress has any additional powers over waters and streams by reason of its war powers, they were not written in the first act and we are not writing them in this act." (Hearings, p. 471.)

serious conflict with the functions properly belonging to the States. They challenge the constitutionality of the Government's jurisdiction in so far as it may be extended beyond the limits actually necessary for the protection of navigation and contend that the encroachment upon their rightful field of activity introduces confusing duplication of authority. They assert that they are thoroughly capable of managing the development of their own water resources and that interference by the Federal Power Commission on non-navigable streams is substantially hampering development under the State laws.

"The position of the States in the matter is fully illustrated by the communications from Governor Horton, of Tennessee, Governor Conley, of West Virginia, and Chairman Carson, of the Virginia State Conservation and Development Commission, which are included in the appendix to this report. In order that the commission might have reliable guidance on the legal aspects of the question, the advice of the Attorney General of the United States was requested relative to the pending application for a development on New River referred to in the letter from the Virginia authorities." (pp. 7-10)

But the advice of the Attorney General was not heeded. Subsequently, on consideration of respondent's application for a 50-year minor part license containing only conditions for the protection of navigation, in accordance with the opinion of the Attorney General, the minutes of the Commission record:

"After due consideration the commission declined to take action on the application, favorable or adverse. *It was concluded that in view of the importance of the questions of jurisdiction as between the United States and the State of Virginia involved in this case a court adjudication is desirable.*" (Eleventh Annual Report of the Federal Power Commission: 1931, pg. 123.)

After this recent and categorical admission that the law contains no express authority for the issuance of license

Act to apply to non-navigable streams. In showing that no justiciable controversy existed the Court pointed out (p. 339) that the bill failed to show that the defendants were taking or about to take any definite action except that the Commission was about to consider and act upon various applications from persons in New Jersey for preliminary permits and licenses "to utilize '*navigable waters* on the boundary and inland' for the development of water power".

In describing the Act, the court stated:

> "Some of its provisions are general, some relate to areas containing public and Indian lands, and some have special application to the use of government dams in developing power. As respects the State of New Jersey, the Act may be adequately described for present purposes by stating that it *relates particularly to navigable waters;* subjects their improvement and utilization for purposes of navigation and developing power to stated restrictions and supervision by a public commission, which it creates;" (p. 335).

Indeed, in describing the effect of the second paragraph of section 23 of the Act, which is here involved, this Court stated that it:

> "provides that any person or corporation, including the State or any municipality, intending to construct a dam or other works in a stream not *declared* navigable 'may in their discretion' file a declaration of their intention with the commission, whereupon it shall by investigation ascertain whether 'the interests of interstate or foreign commerce' will be affected thereby, that if it finds they will be affected the construction shall not proceed unless a license is sought and obtained, and that if it finds the other way the construction may proceed without a license." (*New Jersey* v. *Sargent,* supra, p. 336.)

In discussing the basis of Congress' authority the Court again apparently assumed that no contention was made that

doubtful streams could be determined" and a few years later was still considered not to confer upon the Commission general authority to protect navigation or power interests was built up after ten years to a "suitable inference" and (despite the warning opinion of the Attorney General of the United States) is now put forward as outright and definite authority for the Commission to impose a license upon projects on non-navigable streams. On the record of the Commission itself it would seem that the petitioner's contentions are founded on the Commission's growing pretensions to jurisdiction and not on any intent of Congress.

B. The language of the Act, as well as Congress' clear intent, negatives the right of petitioner to require a license for a project on a non-navigable stream.

In its argument on the construction of section 23 of the Act, petitioner limits itself to characterizing respondent's interpretation as untenable, and quoting reports on the 1935 amendments, omitting, however, any reference to the authoritative report of the House Managers on the 1920 Act (Pet. Br. 89-91). However, consideration of the House Managers' report and of the effect of the language employed in section 23 clearly supports respondent's interpretation and negatives that of petitioner.

This court had occasion to consider the Federal Water Power Act, but did not pass upon it, in *New Jersey* v. *Sargent*, 269 U. S. 328, decided January 4, 1926, when the Court held that the bill of the State of New Jersey did not present a justiciable controversy. However, from the opinion, in its references to the Act and description of its provisions, it would seem to have been the view of the Court that (apart from public lands and Indian reservations) the Act authorizes and requires licenses solely for projects located in navigable waters. Apparently the State of New Jersey did not even surmise, and therefore did not contend, that attempt might be made, at some future date, to construe the

obviously apply solely to projects in navigable waters. Surely, if Congress had intended to deal affirmatively with projects in non-navigable tributaries (other than to authorize a declaration of intention to be filed in case of streams of doubtful navigability, which might or might not be non-navigable, in order to determine their navigability *vel non*), it would have referred specifically to non-navigable streams or to non-navigable tributaries in appropriate sections of the Act, and particularly in section 4 (d), which defines the licensing authority under the Act. Constitutional limitations apart, certainly, if it had intended to grant to the Commission a power which it itself had never exercised or assumed to possess (viz., to require a license for a project in a non-navigable stream), "we may well be confident that Congress would have made its meaning far clearer and more direct". *Interstate Commerce Commission* v. *Oregon-Washington Co.*, 288 U. S. 14, 35.

This Court in *New Jersey* v. *Sargent*, *supra*, would appear to have taken a like view of the general purpose and effect of the Act.

2. *The section of the Power Act empowering the issuance of licenses authorizes them only as to projects on navigable waters.*

Section 4 contains the affirmative grant of powers to the Commission. Section 4 (d), of the original or 1920 Act, defined its jurisdiction to issue licenses as limited to navigation improvements and projects located in navigable waters.

Thus it is obvious that, when section 23, if the Commission finds the interests of interstate or foreign commerce would be affected, remits the declarant to obtain "a license under the provisions of this Act", it can refer only to the licensing authority under section 4 (d). That this is so is clear from the language itself, and it is doubly clear in the light of the House Managers' report that the purpose of section 23 is to provide means to determine whether a

the Act might be interpreted to affect any projects other than those located in navigable waters:

> "Rightly to appraise the bill one should have in mind the doctrine, heretofore firmly settled, that the power to regulate interstate and foreign commerce, which the Constitution vests in Congress, includes the power to control, for the purposes of such commerce, *all navigable waters* which are accessible to it and within the United States, whether within or without the limits of a State, and to that end to adopt all appropriate measures to free such waters from obstructions to navigation and to preserve and even enlarge their navigable capacity; and that the authority and rights of a State in respect of such waters within its limits, and in respect of the lands under them, are subordinate to this power of Congress. *Philadelphia* v. *Stimson*, 223 U. S. 605, 634-638; *United States* v. *Chandler-Dunbar Co.*, 229 U. S. 53, 62-65; *Lewis Blue Point Oyster Co.* v. *Briggs*, 229 U. S. 82, 88; *Greenleaf Lumber Co.* v. *Garrison*, 237 U. S. 251, 258, *et seq.*; *Willink* v. *United States*, 240 U. S. 572, 580; *United States* v. *Rio Grande Irrigation Co.*, 174 U. S. 690, 703." (p. 337).

1. *The statute is unvarying in its reference to navigable waters only.*

In its provisions which in any way relate to projects not on public lands and reservations, the language used throughout the Act shows clearly that Congress intended to deal only with waters actually navigable,—and *not* with non-navigable waters. For instance, among the conditions of a standard form of license, Section 10 (c) prescribes:

> "That the licensee shall maintain the project works in a condition of repair adequate *for the purposes of navigation* . . . ."

Section 10 (b) permits changes in the approved plans only "when emergency shall require for the protection of navigation, life, health, and property". Sections 11 and 12

mining their liability. Under this section if the Commission after an investigation found that 'the interests of interstate or foreign commerce' would not be affected, then *the applicant would be freed from the terms of the Power Act and from the Act of 1899,* which required the consent of Congress and the approval of the Secretary of War and the Chief of Engineers to the plans for the construction of the project. Section 23 put the burden upon the applicant to negative the idea of navigable waters in his application." (Brief on behalf of defendants filed on argument before the District Court for the Western District of Virginia, filed July 18, 1932, in *Appalachian Electric Power Company* v. *Smith, et. al.,* 4 F. Supp. 6.)

This was again admitted after the present litigation was instituted when Solicitor Dozier DeVane, the authorized spokesman for the Federal Power Commission, in testifying upon the amendments which the Commission proposed in 1935 stated:

> "Mr. Mapes. Are these two expressions synonymous, or not: the effect upon interstate commerce and the navigability of a stream?
>
> "Mr. DeVane, Mr. Mapes, *I think they are* * * *"* (Hearings on Public Utility Holding Company Bill, 1935, Part I, p. 474.)

The contention that since "waters in respect of which Congress has jurisdiction" include "every possible feature of congressional regulation and control" and, consequently, that there might be some interest of interstate commerce affected other than in navigable waters themselves was raised and effectively disposed of in the *Rio Grande* decision in 1899, see p. 185, *supra.*

3. *A "proposed construction" itself cannot affect the interests of interstate commerce unless actually located in navigable waters.*

Throughout the Act, wherever such is the intention, reference is carefully made to "constructing, maintaining

stream of doubtful navigability is "within the provisions of the law". This merely confirms the necessary interpretation, viz., that, if the Commission finds that the project is to be located in navigable waters of the United States, the declarant must first apply for and receive a license for such a project, but, that, if the Commission finds the waters non-navigable, the declarant may proceed without federal license upon compliance with State laws.

Petitioner in times past, in referring to the finding to be made under section 23 as to whether "the interests of foreign or interstate commerce would be affected", has sought to treat this language as conferring upon the Commission additional jurisdiction beyond that conferred by section 4 (d). That there is no warrant for such interpretation appears not only from recognized principles of statutory interpretation but from the Conference Report on the provision itself. The statement of the House Managers clearly shows their intention that no additional jurisdiction is conferred by the language in question. Instead, it is merely a method of stating, by reference to the source of Congress' power, that the Commission shall determine whether the stream is navigable.[1] Indeed in the prior litigation regarding the project here involved, petitioner in its brief on its motion to dismiss the amended bill of complaint in the District Court (brought to the attention of the trial court in the instant action) admitted:

> "*Congress, desiring to assist those who were in doubt as to navigability of a stream, provided a method under Section 23 of the Power Act for deter-*

[1] In their statement, p. 202, *supra*, the House Managers very evidently considered that a determination "whether the interests of commerce are affected" is, in substance, merely a determination of navigability.

Further, this is fully confirmed, as the necessary interpretation, by reference to the subject-matter of the investigation, viz., the "proposed construction". It is obvious that the proposed construction itself, as distinguished from its operation, as the language of the statute does in fact distinguish, could not affect the interests of interstate or foreign commerce except *in loco*. See subpoint "3" immediately following.

furnished to him by the Acting Chairman of the Federal Power Commission, said:

> "*None of the proposed works* is in navigable waters and none *can in itself offer physical obstruction to navigation.* Only by the operation of the works in impounding and releasing water, and thus creating an uneven stream flow, can any effect upon the navigability of the Kanawha River be produced."

Obviously, if, as section 23 prescribes, there is to be considered only the effect of the "proposed construction", as distinguished from operation thereof, there can be no effect upon distant navigation, but only upon navigation, if existent, at the site of the "proposed construction" itself. On a non-navigable stream a "proposed construction", *per se*, devoid of any "operating" features, cannot affect the interests of interstate or foreign commerce.[1]

In thus limiting the jurisdictional basis to the effect of the "proposed construction" itself, Congress has made clear that it did not intend that there should be taken into consideration any effect on navigable waters from operation of a plant in upstream non-navigable tributaries, as petitioner now contends, but merely the effect of the *proposed construction* itself, *in loco* (because, of course, effect from a "proposed construction" itself would be experienced only if the "proposed construction" were located actually in navigable waters). This further confirms that the finding to be made under section 23 is merely, and clearly, a finding as to whether the proposed construction is to be located actually in navigable waters. Congress was

---

[1] Section 23 originally did not contain the words "operation" or "operate" and it is clear that Congress intended "proposed *construction*" to refer literally and solely to the *construction* and not to its operation. Moreover, it is significant that, even after the amendments of 1935, it is still only the "proposed *construction*" and *not operation* which is to be the subject of investigation by the Commission and of its resultant finding. See pp. 228-230, *infra*.

and operating" a project. Careful distinction is made between, on the one hand, mere *construction* and, on the other, the *operation* of a dam.[1] Obviously the mere *construction*, i. e., the dam itself, if located in non-navigable waters, could not of itself affect navigation anywhere. It is, therefore, significant that section 23, in specifying the object of the Commission's investigation and finding, mentioned solely the "proposed construction".

A statement to the foregoing effect and of specific application was made by the Federal Power Commission through its Chairman, Secretary of War Dwight F. Davis, in a letter to the Chairman of the Committee on Interstate and Foreign Commerce, House of Representatives, March 27, 1928:

> "*It is not the construction or existence of a dam* or other work in a non-navigable stream which affects or diminishes the navigable capacity of the navigable section below, *but the manner of its operation.*" Italics added. (Eighth Annual Report, Federal Power Commission: 1928, p. 133).

Indeed, the same facts were clearly brought out in an opinion rendered by the Attorney General of the United States to the President September 22, 1930, in relation to the project here involved (R. 2782). The Attorney General, in reciting the facts, taken from a statement thereof

---

[1]For instance,

Sec. 4(d) "* * * licenses * * * for the purpose of *constructing, operating* and *maintaining* dams, * * *" etc.

Sec. 10(e), 2nd sentence: "* * * licensee hereunder shall be liable for all damages occasioned to the property of others by the *construction, maintenance,* or *operation* of the project works * * * *constructed* under the license, * * *" etc.

Sec. 13 "* * * licensee shall commence the *construction* of the project works * * * shall thereafter * * * prosecute such *construction,* and shall * * * complete and put into *operation* such part * * *."

Sec. 21 "* * * lands or property of others necessary to the *construction, maintenance,* or *operation* of any dam, * * *" etc.

tion quite contrary to the fact, that is, an assumption that the character of the different streams throughout the country, and even the points at which navigability of navigable streams ceases, is already well known and established. Obviously this assumption is belied by the very purpose of section 23, which was of course to provide means for an administrative determination of the character of the particular stream. Consequently, it is neither rational nor even possible to attribute to the language in question (which provides for such administrative determination), the finality of conferring upon the Commission jurisdiction over non-navigable streams, even if such were constitutionally possible.

Indeed, the Senators who actively debated the provision would at times refer to the premise of navigable streams and at other times non-navigable streams.[1] They manifestly gave to section 23 and to the particular phrase under discussion the very interpretation which respondent has consistently given it, that the section is intended to deal with streams of doubtful navigability and to authorize administrative determination of the character of the stream.

This too, is the interpretation given to section 23 by the Trial Court (R. 145, 6).

Even if the few words upon which petitioner relies did support its contention, there is much other language in Section 23 which is inconsistent therewith, and which, it must be assumed, Congress would have changed had it intended to give to the section the purpose and effect which petitioner seeks to impute to it. Thus, not only are the very words upon which petitioner places its sole reliance inappropriate, but other changes would have to be made in the language of the section. The modifications necessary to support petitioner's interpretation would be substantially as follows:

> "That any person, association, corporation, State, or municipality intending to construct a dam or other

[1] See pp. 203-5, *supra*.

well aware that the Act of March 3, 1899, adequately protected against harmful operation upstream and that there is no constitutional basis upon which it could impose a licensing requirement for projects on non navigable streams.

4. *Petitioner's interpretation requires a tortuous construction of the language of Section 23.*

Petitioner, in support of its claimed extension of jurisdiction to impose the licensing requirement for projects in non-navigable waters, points to the words "other than those herein defined as navigable waters", in section 23 of the Act (Pet. Br., p. 90). On the basis of these few words petitioner claims that section 23 confers upon the Commission affirmative jurisdiction to require and issue licenses for projects in non-navigable streams, a power never theretofore exercised or asserted by Congress itself. No legislative intent is shown in support of that interpretation, and indeed the clear intent is contra.[1] Other language of the section and the Act clearly negatives the interpretation.[2] Petitioner's interpretation would raise grave doubts as to constitutionality of the Act.[3] Under these circumstances, without further citation, the decision of this Court in *I. C. C.* v. *Oregon-Washington R & Nav. Co.*, 288 U. S. 14, (see pp. 230-3, *infra*) is adequate to refute the contention. However, upon analysis, these words themselves lend no support to the claimed interpretation and seem inappropriate under any interpretation unless read in the sense in which they were understood by the House Managers on the Conference Committee.

In the first place, to give to these few words the significance which petitioner urges upon this Court would be to predicate the interpretation of section 23 upon an assump-

[1] See pp. 201-6, *supra*.

[2] See pp. 214-218, *supra*.

[3] See Resp. Br. pp. 107-20.

On the contrary, no change is necessary to sustain respondent's interpretation which represents the plain legislative intent and is demanded by well established rules of statutory construction. To give section 23 a meaning entirely consistent with the legislative history, it is sufficient merely to place proper emphasis upon the word *"intending"* and to bear in mind that at the time declaration is filed the status of the stream is uncertain. Thus, being doubtful as to the status of the stream, a person may in one case intend to construct the project regardless of whether the stream be found to be navigable or non-navigable or in another case he may intend to construct only if the stream be found to be non-navigable and if therefore no license is required.[1] In either case the statute authorizes him to invoke an administrative determination of the character of the stream. Thus, reading the statute in the light of the uncertain status of the stream at the time the declaration is filed, its meaning is clear that any person proposing to construct a project *in a stream not known or declared to be navigable,* i. e., being uncertain as to its precise status, may file a declaration of intention, whereupon the Commission shall cause investigation of the proposed construction to be made and, if it shall find that the stream is navigable, i. e., that the interest of interstate or foreign commerce would be affected by the proposed construction, he may not proceed until he shall have applied for and received a license under the Act, that is to say, under section 4(d), viz.: for a project in navigable waters. This, it is submitted, is an interpretation of section 23 fully supported by

[1] The Rules and Regulations issued by the Federal Power Commission required, in regard to declaration of intentions filed under Section 23 of the Act:

> "A statement as to whether, if the commission finds that the project will affect the interests of interstate or foreign commerce, the applicant proposes to apply for a permit or for a license" (Rules and Regulations, Federal Power Commission, 2nd Revised Issue, April 1, 1924).

project words across, along, over, or in any stream or part thereof, ~~other than those defined herein as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce between foreign nations and among the several States,~~[1] may in their discretion file declaration of such intention with the commission, whereupon the commission shall cause immediate investigation ~~of such proposed construction~~ to be made *of the character of the stream in which such project is to be located, the nature of the proposed construction, its proposed operation and the effect of any such operation upon the interests of interstate or foreign commerce at the site of such proposed construction or elsewhere,*[2] and if upon such investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction *or any such operation,*[2] such person, association, corporation, State, or municipality shall not proceed with such construction until it shall have applied for and shall have received a license ~~under the provisions of this Act~~ *which the commission is hereby authorized and empowered in such case to issue.*[3] If the commission shall not so find and if no public lands or reservations are affected, permission is hereby granted to construct such dam or other project works in such stream upon compliance with State laws.

---

[1] This language is inappropriate, under any interpretation, since the character of the stream is not known at the time declaration of intention is filed, but the section is invoked for the purpose of obtaining an administrative determination thereon by the Commission.

[2] New Matter represents the extended subject matter which under petitioner's contention would have to be considered by the Commission in addition to merely "such proposed construction". (See pp. 217-20, *supra.*)

[3] Since no authority is found under Section 4(d) for the Commission to issue a license in non-navigable streams, Section 23, if petitioner's interpretation is to be sustained, should confer such affirmative authority instead of merely referring back, as it obviously does, to the licensing authority under Section 4(d). (See pp. 215-17, *supra.*)

tion, such person, association, corporation, State, or municipality shall not proceed with such construction until it shall have applied for and shall have received a license under the provisions of this Act. If the commission shall not so find, and if no public lands or reservations are affected, permission is hereby granted to construct such dam or other project works in such stream upon compliance with State laws."

The addition of the explanatory expression "*streams patently among*" is really unnecessary because, from the authoritative Statement of the House Managers of the Conference Committee and the statements of those responsible for the Bill in the Senate, the sense of this expression may properly be read into the language actually employed. *Barrett* v. *Van Pelt*, 268 U. S. 85.

Or, as a further alternative, the expression "other than those defined herein as navigable waters" might well, with entire consistency with the legislative intent, be read as "other than those *declared* (or known) to be navigable waters as herein defined". This indeed is the interpretation which this Court apparently placed upon the section in describing it in *New Jersey* v. *Sargent, supra*, as providing that a person "intending to construct a dam or other works in a stream not *declared* navigable" might file declaration of intention.[1]

C. The 1935 amendments do not support petitioner's claimed interpretation.

In the lower courts petitioner urged that the amendments to the Federal Water Power Act enacted in 1935 as a portion of the Public Utility Holding Company Act supported petitioner's contentions. Respondent, however, has shown in prior arguments that the amendments, even though enacted at the instance of the Federal Power Commission, do not in fact support petitioner's contention, but

[1] See p. 213, *supra*.

legislative history and entirely consistent with the language used.

Alternatively, since, as has been shown, the few words upon which petitioner relies are ambiguous and inappropriate, it is well settled that they may be disregarded if necessary to give effect to the legislative intent. In *Barrett* v. *Van Pelt*, 268 U. S. 85, at page 90, the Supreme Court said:

> "The intention of the lawmaker constitutes the law. *Stewart* v. *Kahn*, 11 Wall. 493, 504. See *Smythe* v. *Fiske*, 23 Wall. 374, 380. Being satisfied of the legislative intention, the court will not be prevented from giving that intention effect by a too rigid adherence to the very word and letter of the statute. *Oates* v. *National Bank*, 100 U. S. 239, 244."

See also: *Fleishmann Co.* v. *U. S.*, 270 U. S. 349 (1926); *Hawaii* v. *Mankichi*, 190 U. S. 197 (1903); *Lau Ow Bew* v. *U. S.*, 144 U. S. 47 (1892); *Church of the Holy Trinity* v. *U. S.*, 143 U. S. 457 (1892); *Oates* v. *National Bank*, 100 U. S. 239 (1879); *Stewart* v. *Kahn*, 11 Wallace 493 (1870).

However, if language were desired to express legislative intent more clearly than the language actually employed, it would at most be to interpolate a few words to confirm the intent already so clearly expressed in legislative history, viz.:

> "That any person, association, corporation, State, or municipality intending to construct a dam or other project works across, along, over, or in any stream or part thereof, other than *streams patently among* those defined herein as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce between foreign nations and among the several States, may in their discretion file declaration of such intention with the commission, whereupon the commission shall cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construc-

navigable streams. Instead, the amendments proposed by the Commission were couched in terms of general reference to the full power of Congress over navigable waters under the Commerce Clause in the mistaken belief that this would extend the Commission's jurisdiction.[1]

In the provisions here involved amendments were made only in the licensing authority under section 4(d), which became 4(e), and in section 23 itself. No change was made in the definition, for the purposes of the Act, of "navigable waters".

In the licensing provision, which became 4(e), the only pertinent amendment was to change the expression "any of the navigable waters of the United States" to read "any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States." These expressions are clearly synonymous. If anything, it was a retrogression in phraseology, a reversal of the advance made in codifying in 1899 the Rivers and Harbors legislation theretofore in force. At that time, it will be recalled, the expression "any waters in respect of which the United States has jurisdiction" was simplified and stated as "any of the waters of the United States." At about the same time this Court in the *Rio Grande* decision rejected petitioner's contention based on the "broad generality of this language", that the expression "waters in respect of which the United States has jurisdiction", embraced more than navigable waters.[2]

The testimony of Dozier DeVane, solicitor of the Commission, who appeared on its behalf at the House hearings on the amendments, seems conclusive against petitioner:

> "Mr. Mapes. And you are not proposing to amend the licensing section or provisions of the Water Power Act?

---

[1] See pp. 185, 216, *supra*.

[2] See note 1, p. 182, *supra* and discussion of the *Rio Grande* Decision, p. 185, *supra*.

even weaken it. In this Court petitioner questions whether these amendments "have any relevant effect here" (Pet. Br. 91) and admits that "it is a matter of no consequence whether its case be governed by the 1920 or 1935 language". (Pet. Br. 92.)

The 1935 amendments were enacted together with the Public Utility Holding Company Act (1935). The Federal Water Power Act of 1920, as amended, became Part I of Title II of the Federal Power Act. The amendments were proposed by the Commission and adopted practically *verbatim*[1] by Congress upon the repeated assurance from the Commission that they did not extend the licensing power under the Act. But, even so the Commission was apparently loath to ask, and in any event did not ask, flatly for a grant of licensing power over projects on non-

[1] See Report of Senate Committee on Interstate Commerce, Senate Doc. 621, 74th Cong., 1st Sess., p. 17:

> "The amendments to the present Federal Water Power Act have been *requested by the Federal Power Commission* on the basis of its experience in the administration of that act. *Most of them are designed merely to clarify the act in its application to situations that have arisen in its administration.*"

Also Report of House Committee on Interstate and Foreign Commerce, House Doc. 1318, 74th Cong., 1st Sess., p. 7:

> "The amendments to the present Federal Water Power Act are all *minor. They have been requested by the Federal Power Commission, largely for the purpose of clarifying the act* in its application to situations that have arisen in its administration, and also to strengthen it in certain particulars."

The only changes (in any of the provisions affecting licensing power) made by Congress from the amendments proposed by the Commission were (1) to correct "commerce *between* foreign nations" to read "commerce *with* foreign nations" and (2) in order to correct an obvious typographical error, to reinsert "interests of" before "interstate commerce".

Compare section 4(e) and 23(b) as proposed by the Commission (Hearings, Committee on Interstate and Foreign Commerce, 74th Cong., 1st Sess., on H. R. 5423, pp. 451-459) with the amendments as adopted.

However, it clearly negatives petitioner's interpretation of section 23 as requiring a license for a project located in non-navigable waters, for, while inserting a prohibition already found in the Act of 1899, the amended section (like the Act of 1899) does not purport to make unlawful the maintenance of any existing projects in non-navigable streams. It was thus a congressional reaffirmation, entirely consistent with the Act of 1899,[1] of the legislative intent that the Federal Power Act requires licenses only of projects in navigable waters of the United States.

The only other changes were: (a) Making the filing of a declaration of intention mandatory; and (b) prohibiting persons from constructing, *maintaining or operating* a project without license, if the Commission shall have found that the *proposed construction* (merely) would affect the interests of interstate commerce.

The first change, as petitioner states (Pet. Br. p. 92), does not affect respondent in the present litigation, for declaration of intention had been filed ten years before the amendment.

The second change, prohibiting a person from constructing, *maintaining or operating* a project without license, after an adverse finding under section 23, merely serves to emphasize the failure of Congress to change the statement of what the Commission is to investigate under section 23, leaving that part as it stood, viz., that:

> "the Commission shall cause immediate investigation of such *proposed construction* to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such *proposed construction*, * * *",

a license shall be required. The retention of the italicized words, while referring in the 1935 amendments to "construct, *operate or maintain*" in the first sentence of this section and to "construct, *maintain or operate* in the second sentence

[1] See pp. 180-83 *supra*.

"Mr. DeVane. *The new matter makes no amendments to the licensing sections of the Water Power Act.*" (Hearings on Public Utility Holding Company bill, 1935 (Part I) p. 450).

Obviously, this was so and is so and petitioner is now constrained to admit (although in both lower courts it strenuously denied) that "it is a matter of no consequence whether its case be governed by the 1920 or the 1935 language." (Pet. Br. p. 92).

Mr. DeVane further stated:

"Mr. DeVane. * * * *it is my belief that insofar as our amendment is concerned, we are not enlarging the power of this Commission.* We are simply endeavoring to clarify section 4, and if Congress has any additional powers over waters and streams by reason of its war powers, they were not written in the first act and we are not writing them in this Act" (Hearings, p. 471).

Again:

"Mr. Mapes. Are these two expressions synonymous, or not: the effect upon interstate commerce and the navigability of a stream?

"Mr. DeVane. Mr. Mapes, *I think they are* * * *"* (Hearings, p. 474).

Section 23 also was amended but the amendments prejudice rather than aid petitioner's interpretation.

The second paragraph thereof is now designated (b) and a new sentence introductory thereto was added. This makes it unlawful *"to construct, operate, or maintain"* any dam "across, along, or in any of the navigable waters of the United States * * * except under and in accordance with the terms of a permit * * * granted prior to June 10, 1920, or a license granted pursuant to this Act." This prohibition relates exclusively to projects *in navigable waters.* Of course the prohibition was not at all necessary, for it merely duplicates the continuing prohibition of the Act of March 3, 1899.

1. If Congress were intending to grant the Commission a new and drastic power, it would have made its intended meaning clear and direct.

2. If such purpose were claimed, support should be found in legislative history.

3. The Court's duty is to construe the statute, if fairly possible, so as to avoid, not only the conclusion that it is unconstitutional, but also grave doubts upon that score.

The statute involved in that decision was an amendment to the Interstate Commerce Act of 1887, added by the Transportation Act, 1920, consolidating and amending provisions theretofore in force. The new provision read, in part:

> "The commission may, after hearing, in a proceeding upon complaint or upon its own initiative without complaint, authorize or require by order any carrier by railroad subject to this Act, party to such proceeding, to provide itself with safe and adequate facilities for performing as a common carrier its car service as that term is used in this Act, *and to extend its line or lines:* Provided, That no such authorization or order shall be made unless the commission finds, as to such extension, that it is reasonably required in the interest of public convenience and necessity, or as to such *extension or facilities* that the expense involved therein will not impair the ability of the carrier to perform its duty to the public." (p. 34) (Italics added)

The Commission had ordered the defendant railway to extend its line a distance of 185 miles to connect with the Southern Pacific. This court denied that the language in question was sufficient to authorize the new power claimed by the Commission to enter the order in question and stated:

> "The phrase 'and to extend its line or lines' is part of a single sentence committing to the Com-

emphasizes that Congress neither made nor intended any extension of jurisdiction of the Commission to require a license for projects in non-navigable streams, if indeed it had the power so to do.

Obviously, as petitioner now agrees (Pet. Br. 91, 92) the amendments which were made effected no change in the Act so far as concerns this respondent or the present litigation. Clearly if Congress had had any intention of enlarging or attempting to enlarge the Commission's powers it would not have spoken like a Delphic Oracle but "would have made its intended meaning clear and direct". (*Interstate Commerce Commission* v. *Oregon Washington R. & Nav. Co., supra.*)

D. Petitioner's interpretation fails to meet the tests prescribed by this Court.

It is clear, of course, as shown by the *Rio Grande* decision, that Congress had never exercised or attempted to exercise, if indeed it could do so, the power to require a license for a project on a non-navigable stream—or to make such a project unlawful *per se*. It is also apparent that in enacting the Federal Water Power Act in 1920 Congress had no intention to assert such a power nor to give the Commission any control over navigable waters other than authority to license projects which were unlawful under the Act of 1899. Petitioner can point to no clear and direct language employed by Congress. On the contrary, it is abundantly clear that the attempt by the Commission to assert the power to require a license for a project on a non-navigable stream (though at first advanced with some trepidation) was not based upon either language or intent of Congress itself but is merely an attempt by an administrative agency to assert a new and drastic power not theretofore asserted by Congress. Its interpretation obviously fails to meet the tests prescribed by this Court in *Interstate Commerce Commission* v. *Oregon-Washington R. & Nav. Co.*, 288 U. S. 14. The principles there enunciated are:

> quired to build into territory they had not undertaken to serve. The scope of the recommendation was not enlarged in the testimony before the committee of the Senate having the Transportation Act in charge" (pages 35-36). (Italics added)

A third cardinal principle of statutory interpretation, here forcefully present, is found in this same decision where this court, after finding the particular language insufficient for the purpose claimed, and lacking support in legislative history, stated:

> "There is another consideration which supports the construction adopted. *Our duty is to construe the statute, if fairly possible, so as to avoid not only the conclusion that it is unconstitutional, but also grave doubts upon that score*". (p. 40). (Italics added)
>
> • • •
>
> "The construction we adopt makes it unnecessary to pass upon the grave questions of constitutional validity raised by appellants' argument" (p. 41-42).

The principles of interpretation are also well stated in *National Labor Relations Board* v. *Jones & Laughlin*, 301 U. S. 1, 29-30. In that case the validity of the National Labor Relations Act was challenged as an attempt to regulate all industry, thus invading the reserved powers of the States over their local concerns. The argument was based upon the broad language of the Act, much broader, of course, than any provisions of the Federal Water Power Act and the claim was made that its scope could not be limited by interpretation so as to be held within the constitutional powers. In answer, the Court stated:

> "If this conception of terms, intent and consequent inseparability were sound, the Act would necessarily fall by reason of the limitation upon the federal power which inheres in the constitutional grant, as well as because of the explicit reservation

mission the power to require carriers to provide safe and adequate facilities for car service as defined in the act. The reasonable conclusion is, therefore, that the extensions mentioned have to do with car service, and *are not intended to create a wholly independent subject of jurisdiction.* In the proviso the furnishing of facilities and extension of lines are blended as belonging in a single class. *We should expect, if Congress were intending to grant to the Commission a new and drastic power* to compel the investment of enormous sums for the development or service of a region which the carrier had never theretofore entered or intended to serve, *the intention would be expressed in more than a clause in a sentence dealing with car service.* As said in *Interstate Commerce Commisison* v. *United States ex rel. Los Angeles,* 280 U. S. 52, 70:

"'If Congress had intended to give an executive tribunal unfettered capacity for requisitioning investment of capital of the carriers and the purchase of large quantities of land and material in an adverse proceeding, *we may well be confident that Congress would have made its meaning far clearer and more direct than in the present meager provisions of the Transportation Act'* " (page 35). (Italics added)

In addition to the requirement of *clarity and sufficiency of expression of legislative intent,* this Court pointed out a second requisite to upholding an attempted exercise by an administrative body of a new and drastic power, which is equally compelling in favor of respondent's interpretation of the statute here involved, viz., *support in legislative history,* for it went on to state:

"Moreover, *if the purpose were that claimed by the Commission, support should be found in legislative history.* But none has been called to our attention. In the report to Congress for 1919, the Commission reiterated an outline of the policies previously suggested for legislative action in view of the approaching termination of federal control. No intimation is given that carriers should be re-

section 23 of the Act to require a license for a project on a non-navigable stream, the effect would be to grant irrevocable permission for the construction, maintenance and operation of a project which under changing conditions might come to impair navigable capacity. Though this contention has now seemingly been abandoned, its refutation brings important practical interpretation to the Act.

The Rivers and Harbors Act of 1899 in protection of navigation has of course not been repealed, expressly or impliedly, by the Federal Power Act or otherwise. Indeed, petitioner is suing under that Act as well and has failed to prove a cause of action thereunder. The Federal Water Power Act of 1920 contained no prohibition against structures but, as was forcefully pointed out in the debate, the prohibition was already in the law, under the Act of 1899, and the 1920 statute was merely a "consent statute", designed to afford a license or permit in the face of the standing prohibition in respect of navigable waters.[1] It has not been, nor could it be, contended that the provisions of the Rivers and Harbors Act of 1899 have proven in any respect inadequate to protect navigation. Indeed, the reverse is true and it is uniformly recognized that the Rivers and Harbors Act of 1899 has been fully efficacious to protect navigation; that violations of its terms have been rare; and that, when occurring, any violations have been quickly remedied, usually without need to resort to legal proceedings under the Act. Clearly, any contention that further and additional protection of navigation by the Commission is required, and that a failure to reach out and extend its control might prejudice the interests of navigation, would only reveal desperation in an attempt to justify the extended authority it claims.

Such a contention not only would be contrary to settled principles of fundamental law, but would involve the paradox of, on the one hand, urging that the power of the federal government to regulate navigation is so great and so broad

[1] See pp. 198-200, *supra*.

of the Tenth Amendment. *Schechter Corp.* v. *United States,* 295 U. S. 495, 549, 550, 554. The authority of the federal government may not be pushed to such an extreme as to destroy the distinction, which the commerce clause itself establishes, between commerce 'among the several States' and the internal concerns of a State. *That distinction between what is National and what is local in the activities of commerce is vital to the maintenance of our federal system.* Id.

"But we are not at liberty to deny effect to specific provisions, which Congress has constitutional power to enact, by superimposing upon them inferences from general legislative declarations of an ambiguous character, even if found in the same statute. The cardinal principle of statutory construction is to save and not to destroy. We have repeatedly held that as between two possible interpretations of a statute, by one of which it would be unconstitutional and by the other valid, our plain duty is to adopt that which will save the act. Even to avoid a serious doubt the rule is the same. *Federal Trade Comm'n.* v. *American Tobacco Co.,* 264 U. S. 298, 307; *Panama R. Co.* v. *Johnson,* 264 U. S. 375, 390; *Missouri Pacific R. Co.* v. *Boone,* 270 U. S. 466, 472; *Blodgett* v. *Holden,* 275 U. S. 142, 148; *Richmond Screw Anchor Co.* v. *United States,* 275 U. S. 331, 346.

"We think it clear that the National Labor Relations Act may be construed so as to operate within the sphere of constitutional authority".

Application of these rules of interpretation, thus recently affirmed by this Court, seemingly compels respondent's interpretation of section 23 of the Federal Water Power Act and effectively negatives that of petitioner.

E. The reasonable interpretation of Section 23, required by its legislative history, its language and recognized principles of statutory construction, leaves every federal interest adequately protected.

The contention has at times been advanced by petitioner that if authority should be denied to the Commission under

The Rivers and Harbors Act of March 3, 1899 was passed under the power of Congress to regulate commerce. As is clearly stated in the *Louisville Bridge Co.* case, *supra,* at page 417:

> "That power is a very great power, and *in its nature continuing,* not being exhausted by any particular exercise."

The federal government cannot be precluded from the exercise of such a power whenever circumstances arise justifying such exercise. *Union Bridge Co.* v. *United States, supra.*

Quite to the contrary of petitioner's contention that the authority of the Federal Power Commission under the Federal Water Power Act extends beyond that exercised and exercisable under the Act of 1899, the legislative intent clearly shows, and the language of the Act confirms, that apart from projects on public lands and reservations, authority to require a license under the Federal Water Power Act is limited to projects physically located in navigable waters; and that as to projects in non-navigable waters continued reliance is and must be placed upon the Act of 1899 rather than the Federal Water Power Act. (See p. 189 *supra.*)

Respectfully submitted,

RAYMOND T. JACKSON,
M. F. MILLIKAN,
A. HENRY MOSLE,
CRESWELL M. MICOU,
FRASER M. HORN,
WENDELL W. FORBES,
M. W. BELCHER, JR.,
JOHN L. ABBOT.
Counsel for Respondent.

August 31, 1940.

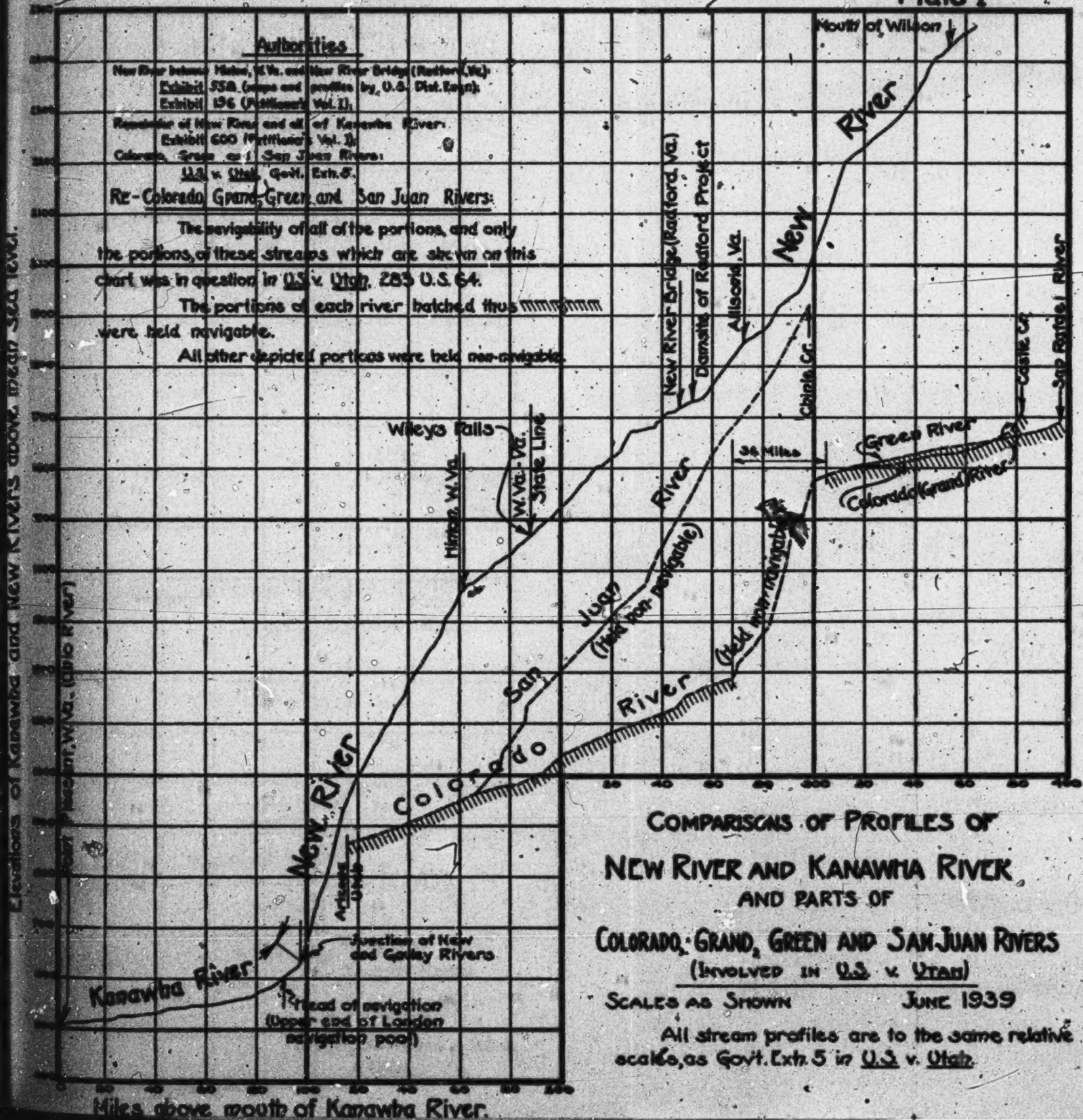
as to permit it, even before occasion for exercise of jurisdiction has arisen, to reach out and impose licensing conditions beyond the recognized limits of constitutional authority and yet, on the other hand, contending that this great and broad power to control navigation is snuffed out by failure to reach out in advance of any occasion for its exercise. Indeed, any contention that the power to regulate navigation could be surrendered, even by the most direct and unconditional assent by Congress itself, has been effectively disposed of by numerous decisions of this Court. *Louisville Bridge Co.* v. *United States*, 242 U. S. 409; *Union Bridge Co.* v. *United States*, 204 U. S. 364; *Greenleaf Lumber Co.* v. *Garrison*, 237 U. S. 251; *Sanitary District of Chicago* v. *United States*, 266 U. S. 405; *Monongahela Bridge Co.* v. *United States*, 216 U. S. 177; *West Chicago Railway* v. *Chicago*, 201 U. S. 506.

In *Louisville Bridge Co.* v. *United States*, *supra*, Congress itself had expressly consented to the construction of a bridge in a certain location and at a certain height over a navigable stream without reserving any right of revocation or amendment. The Act authorizing the construction set out minimum specifications for said bridge and declared

> "that the bridge erected under the provisions of this Act shall be a lawful structure * * *."

In due course, however, changing conditions of navigation rendered the bridge an obstruction to navigation and the Secretary of War, *proceeding under the Act of March 3, 1899*, and without any further or express authority or direction from Congress, ordered the Bridge Company to alter the bridge in the interests of navigation. This Court held that neither the consent of Congress to the original structure nor the fact that as originally constructed it did not interfere with navigation at the time would bar an action by the Secretary of War under the Act of 1899 to compel alteration of the bridge at the Bridge Company's expense whenever subsequent conditions of navigation required such alteration.

Plate I

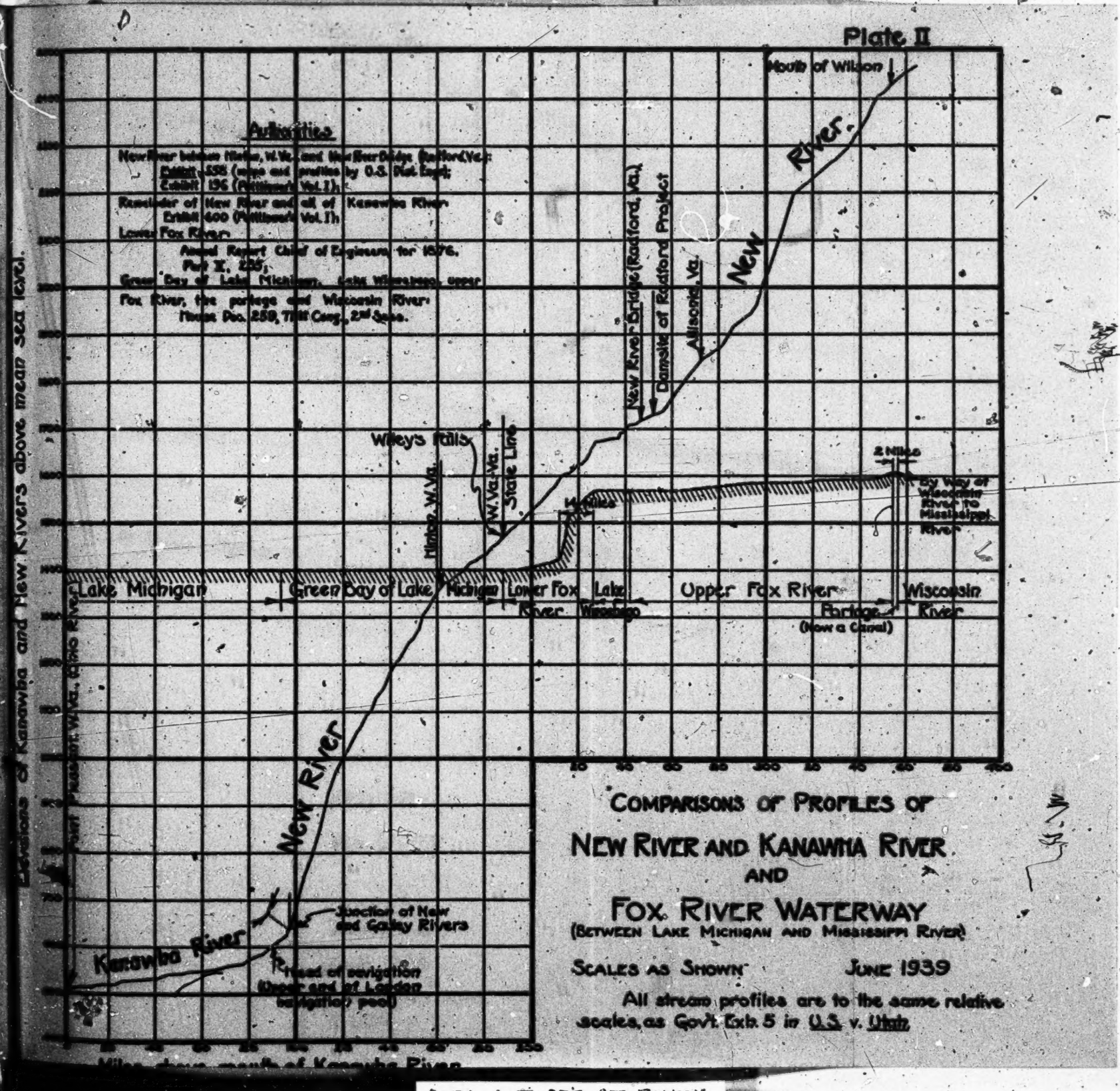


COMPARISONS OF PROFILES OF
NEW RIVER AND KANAWHA RIVER
AND PARTS OF
COLORADO, GRAND, GREEN AND SAN JUAN RIVERS
(INVOLVED IN U.S. v. UTAH)

SCALES AS SHOWN JUNE 1939

All stream profiles are to the same relative scales, as Govt. Exh. 5 in U.S. v. Utah.

Plate II



COMPARISONS OF PROFILES OF

NEW RIVER AND KANAWHA RIVER

AND

FOX RIVER WATERWAY

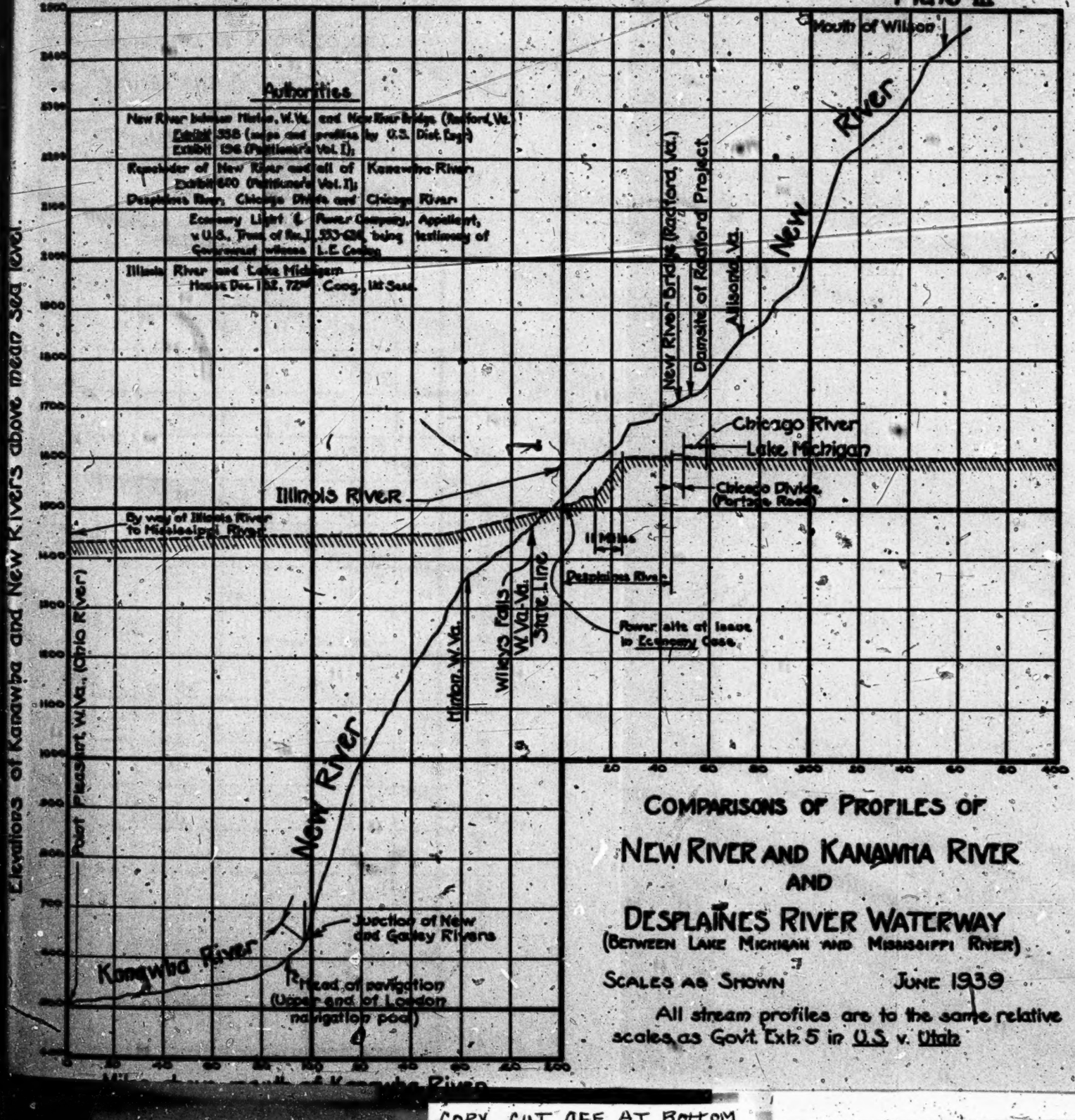
(BETWEEN LAKE MICHIGAN AND MISSISSIPPI RIVER)

SCALES AS SHOWN JUNE 1939

All stream profiles are to the same relative scales as Govt. Exh. 5 in U.S. v. Utah

COPY CUT OFF AT BOTTOM

Plate III



COMPARISONS OF PROFILES OF
NEW RIVER AND KANAWHA RIVER
AND
DESPLAINES RIVER WATERWAY
(BETWEEN LAKE MICHIGAN AND MISSISSIPPI RIVER)

SCALES AS SHOWN JUNE 1939

All stream profiles are to the same relative scales as Gov't Exh. 5 in U.S. v. Utah

COPY CUT OFF AT BOTTOM

Plate IV

COMPARISONS OF PROFILES OF NEW RIVER AND KANAWHA RIVER AND TENNESSEE RIVER

(BETWEEN KNOXVILLE, TENN. AND PADUCAH, KY.)

SCALES AS SHOWN AUGUST 1940

All stream profiles are to the same relative scales, as Govt Exb. 5 in U.S. v. Utah

Authorities

New River between Hinton, W.Va. and New River Bridge (Radford, Va.)
Exhibit 358 (table and profiles by U.S. Dist Engrs.
Exhibit 396 (Petitioners' Vol. X)

Remainder of New River and all of Kanawha River:
Exhibit 600 (Petitioners' Vol. I)

Tennessee River:
Heads: Senate: House Doc. 781, 64th Cong., 1st Sess.
Remainder of River: House Doc. 328, 71st Cong., 2nd Sess.

Elevations of Kanawha and New Rivers above mean sea level.

Elevations of Tennessee River above mean sea level.

Miles above mouths of Kanawha River and Tennessee River respectively

COPY CUT OFF AT BOTTOM